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AN EXAMINATION OF THE DEPARTMENT OF THE NAVY'S SPENDING IN RELATION TO THE BUSINESS CYCLES IN THE UNITED STATES, FISCAL YEARS 1954-1963

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AN EXAMINATION OF THE DEPARTMENT OF THE NAVY'S SPENDING IN RELATION TO THE BUSINESS CYCLES IN THE UNITED STATES, FISCAL YEARS 1954-1963

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INTRODUCTION

This study was prompted by remarks made in an article of the U. S. Naval Institute Proceedings, April, 1959, by Captain Donald G. Gumz, USN. In this article, Captain Gumz wondered, because of fluctuations of the aircraft inventory of the Navy, whether funds furnished to the Department of Defense, and in particular to the Department of the Navy, were used as an economic weapon. During the course of this investigation, contrary to the information stated by Captain Gumz, the aircraft inventory of the Navy appeared to be relatively stable; however, there were very wide fluctuations in spending, from month to month, under the appropriation title which finances the purchase of aircraft.

The general format of this paper is as follows. Chapters I and II give some general information as to how the government can influence the state of the economy and how it determines the state of the economy for any time period. Chapter III presents the statistical information used, while Chapters IV and V present the analysis and conclusions generated.

The government has gradually increased its role in the economic life of the country until there now exists a government committed to the concept of trying to maintain continuous

prosperity. The basic premise of this paper will be examined in light of the following questions. Is the United States, as a nation, so engrossed with the concept of prosperity that the utilization of defense funds is used primarily to help maintain a growing economy with defense a secondary consideration? If there is a genuine easing of world tensions, will defense expenditures be maintained at its present rate in order to forestall any recessive tendency in the economy? A close examination of the Department of the Navy's spending may throw some light on this subject.

CHAPTER I

THE ROLE OF GOVERNMENT IN MAINTAINING A STABLE ECONOMY

Since the development of Economics as a recognized field of study, much has been written regarding the role government should play in helping shape the economic pattern of any given country. These writings have been as dissimilar as Adam Smith and his Wealth of Nations and Karl Marx's Das Kapital, with the corresponding concepts of minimum governmental control to maximum governmental control. This chapter will not attempt to cover any of these concepts and philosophies, but will describe the role of the United States Government in the United States economy, as envisioned by modern economists, in today's environment.

This chapter will describe the functioning of the various devices used by the government in order to induce certain trends in the economy, but will not make any attempt to evaluate the often contradictory steps which must be considered in developing an intelligent approach to economic manipulation by government. Some of the solutions for curing a particular economic ill may add fuel to the fire of another economic ill. For explanatory purposes, each device used by the government will be considered as if it

existed by itself and the effects of manipulation are discussed as they would theoretically exist by themselves. The interplay between the various devices will not be considered. Information concerning this facet of government controls may be found in most modern economics texts.

Spending Schedules[1]

Before getting into the major discussion area of this chapter, monetary and fiscal policies of the government, an examination of some of the basic concepts relating thereto is in order. Any change in the monetary or fiscal policies of the government will have an effect on the spending characteristics of the nation. Very briefly, the spending characteristics of the country can be divided into three broad categories: consumption, investment, and government. Consumption may be defined simply as consumer spending. This includes ALL spending by the consumer for all goods and services. Investment is the NET investment spending to provide for future business expansion. The amount required to balance depreciation has already been deducted. This then represents total new investment spending. Government represents the total of government spending.

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[1] For a detailed discussion of this subject see Paul A. Samuelson, Economics, An Introductory Analysis, (New York: McGraw-Hill Book Company, 1961), Chapter 13, pp. 258-283.

These three broad areas of spending can be combined to help determine the state of the economy. The two terms most frequently used are Gross National Product (GNP) and Net National Product (NNP). The difference between these two items is the allowance for depreciation. Since the investment curve reflects net investment only, referral will be made to this value in any discussion of the state of the economy. This value is useful in any attempt at comparing the state of the economy with any previous year and also gives us a current picture as to the rate of growth of the economy.

Figure 1 shows the relationship between the three major spending schedules. In this figure we use the concept of the forty-five degree line to help determine the NNP at any given time. Make the scale for Total Spending equal to the scale for Net National Product. Next, construct a forty-five degree line from the intersection of the two scales. Any point on this forty-five degree line will be equidistant from the x or y axis of the graph. Since the scales used on both axis are exactly equal in value, it follows that, for a point on the forty-five degree line, the value indicated on one scale will equal the value on the other scale. Place a point E on the forty-five degree line, determine what value in dollars of total spending it represents, then immediately the amount in dollars of NNP is known.

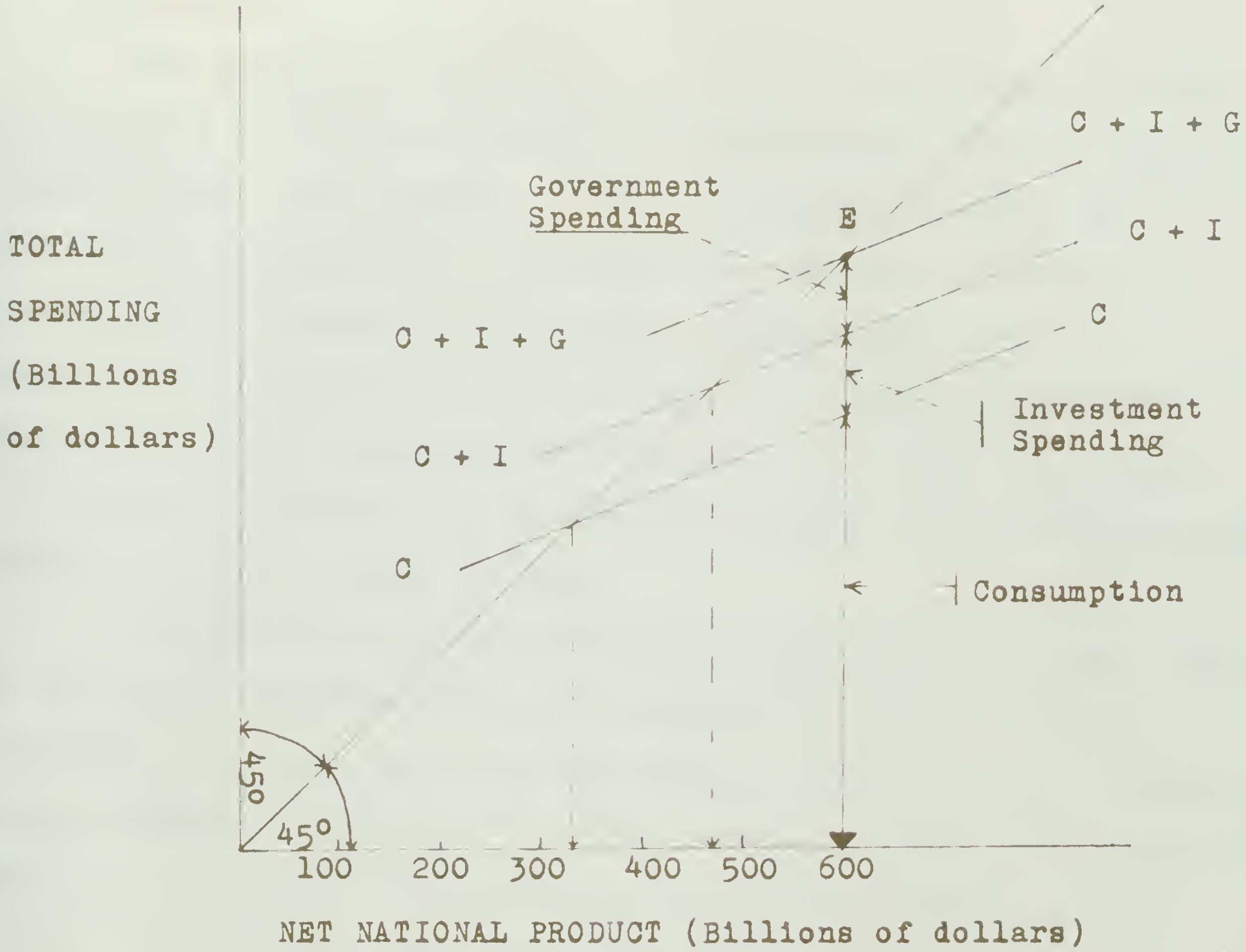

Figure 1. Spending Schedules.

The various schedules depicted in Figure 1 actually have a slight bow to them, but are represented here, as straight lines, for simplicity.

The point of equilibrium, E, where total spending and NNP are equal is at the intersection of the spending schedule under consideration. For example, if we were considering only the effect of consumption as a determinant of NNP then it can be determined from Figure 1 that total spending would be approximately three and a quarter billion dollars and that the NNP derived from consumption only would be the same. The effect of investment spending and governmental spending with the resultant effect on NNP can easily be seen.

Of interest also is the rather large change that can occur in NNP with a comparatively small change in spending. With an increase in spending of approximately two hundred billion dollars, NNP can almost be doubled. In effect, a sixty percent increase in spending can generate approximately one hundred percent increase in NNP. Bear in mind that the values quoted in this short discussion of spending are illustrative and are designed to show general principles only.

Of concern later will be the effect of governmental spending, and in particular Navy spending, as it tends to affect the national income picture. This concept, therefore, of generating a change in NNP greater than the increase or decrease

in spending is important.

Monetary Controls and the Federal Reserve

In the United States monetary controls are vested in the Federal Reserve Board. The Federal Reserve System came into being in 1913, but did not have the great power that it enjoys today. The Banking Acts of 1933 and 1935 gave the Board greater powers in monetary controls, such as open market operations. The primary advantage that the Federal Reserve has in attempting to induce changes in the economy is that of quick action. The Federal Reserve Board has its powers predefined so that it does not have to go to Congress or to the President to act. Also, the effects of its actions tend to become evident in a relatively short period of time.

The prime function of the Federal Reserve Board is control of the country's supply of money and credit. If conditions are such that an inflationary trend seems to be developing then the Board will act to contract the economy; if conditions indicate that the economy is becoming slightly depressed, then it will act in a manner which will tend to expand the economy. The Federal Reserve Board attempts primarily to lean into the prevailing economic winds.

An examination of how the Federal Reserve Board accomplishes this follows.[2] What is the process by which the Federal Reserve effects the supply of money and credit in the United States? In explaining this process an assumption is made that there are indications of an inflationary threat and that the monetary brakes are required to help maintain a stable economy. This process consists essentially of five steps.

First, the Board must cut down on the bank reserves.

Second, with each dollar contraction in bank reserves there will be approximately a five to one contraction in total bank money.[3]

Third, contraction of the money supply means that credit will be very tight and that high interest rates will prevail.

Fourth, tight credit leads to less investment.

Fifth, a downward shift in investment and government spending will lead to a downward effect in total spending, prices and jobs.

Thus, with the initiation of step one, braking action would occur, slowing up the economy.

In order to spur the economy the initial step would consist of increasing the bank reserves. The above steps would occur in

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[2] Ibid., p. 345. A more detailed discussion can be found in this text.

[3] Ibid. The five to one ratio quoted is based on an approximation of the legal reserves required to be held against total demand deposits by member banks of the Federal Reserve System. A detailed discussion of this "multiplier effect" can be found on page 331.

the same order but with an opposite effect.

How can the Federal Reserve initiate the above process? There are several things that can be done. The three main weapons available to the Board are:

1. Open market operations.
2. Discount rate policy.
3. Changing the legal reserves requirements.

In addition to the above there are several minor weapons that have been employed by the Board. These are:

1. Moral suasion.
2. Establish margin requirements on stock purchases.
3. Credit controls.
4. Controls on housing mortgage contracts.

Of these minor weapons only the first two are still in effect, Congress having allowed the remainder to elapse.

A brief description of how each weapon works is discussed below. The approach taken for each description is that there are economic conditions indicating an inflationary trend and that the proper course of action is to contract the economy by applying monetary brakes.

Open Market Operations

This is the principal weapon used by the Federal Reserve Board. In order to effect the supply of money the Federal Reserve

Board buys or sells government bills. These are of short duration, usually thirty, sixty or ninety days. In order to contract the economy the Board sells these bills to several different groups. They are traded through some six dealers in government bills and the exact purchasers are not known. However, it is safe to assume that the large insurance companies, big business firms and commercial banks are the principal buyers.

The buyer pays for the government bills with a draft which the Federal Reserve passes for payment to a member bank. This reduces the bank reserves by the amount of the draft and sets off a five to one[4] contraction of the available money supply. This process is a never ending one and continues on a day to day basis.

Discount Rate Policy

The Federal Reserve Banks make loans to member banks. Such loans are called "discounts." The Board uses its ability to change the rate of interest on these loans (discount rate) to attempt to induce certain trends in the money supply and credit structure in the country. The discount rate, as a rule, is set to follow the market. The open market operations have the effect of

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[4] The legal reserve requirement is assumed to be twenty percent of demand deposits.

drying up the total money supply. As money becomes scarce the member banks will try to borrow from the Federal Reserve System so as to increase their respective money supplies. The Board in turn will raise the discount rate to discourage the borrowing of money from the Federal Reserve Banks, thus tending to keep the money supply and credit at a level lower than that indicated by an inflated economy.

The Federal Reserve Board is passive in the execution of its authority in this area. It cannot go out in the market place and drum up business. It can only wait for the business to come to it. Therefore, the Federal Reserve cannot always set the discount rate as accurately as it might desire. The raising of the discount rate will tighten credit and will act as a monetary brake on the economy.

Changing the Legal Reserve Requirements

Congress has given the Federal Reserve Board the power to change the legal reserve requirements within certain specified limits. The Board can vary the reserve requirements from seven to fourteen percent for country banks and ten to twenty-two percent for other banks. This tool is extremely powerful and is only used after very careful deliberation. It is not used every day as the open market operations are. Any changes in the reserve requirements will have an almost instantaneous effect within the

money supply of the country. An examination of what will happen if the reserve requirements are raised is discussed below.

Assume that the legal reserve requirement is to be raised from twenty to twenty-five percent of demand deposits.[5] How will this affect the supply of money and credit within the economy? A reserve requirement of twenty percent means that the bank must keep on hand twenty percent of its demand deposits in an extremely liquid form. This twenty percent of demand deposits is not available for loans or other investment purposes. The Federal Reserve Board decides to raise the legal requirements. What will happen? Immediately upon the issuance of such an order the member banks will show a deficit with respect to reserves. The bank will have to sell some of its bonds and call in some of its loans. The bond buyers will use up their demand deposits in the purchase of the bonds and the borrowers would have to utilize their demand deposits to repay the loans. The process will only stop when the banks have brought down their demand deposits to the new ratio of four to one. Table 1 demonstrates this.

During the adjustment to this rise in the reserve requirement there will be a rapid drying up of the available money and credit. It would cause a very sharp drop in the investment

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[5] For purposes of illustration an increase in the reserve requirement from twenty to twenty-five percent is assumed. In actuality the Federal Reserve Board would have to get Congressional approval to raise the reserve requirement above twenty-two percent.

TABLE 1

EFFECT OF RISE IN LEGAL RESERVE REQUIREMENTS FROM ONE-FIFTH TO ONE-FOURTH[a]

Before: When 5:1 prevails

Member Banks Assets		Member Banks Liabilities	
Reserves	$20	Demand Deposits	$100
Loans and Investments	80		
Total	$100	Total	$100

After: When 41: prevails

Reserves	$20	Demand Deposits	$ 80
Loans and Investments	60		
Total	$80	Total	$ 80

The same base of reserves now supports only 4:1, not 5:1 of deposits.

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[a] Paul A. Samuelson, *Economics, An Introductory Analysis*, (New York: McGraw-Hill Book Company, 1961), Chapter 15, p. 353.

and government spending schedules, resulting in a sharp drop in the national income picture. The utilization of this weapon would contract the economy very drastically, and is used with great discretion.

It might be noted that in 1936-1937, reserve requirements were sharply raised with little effect on the economy. During this period banks had found loans and other investments so unattractive that they had large amounts of "excess" reserves. Thus the raising of the reserve requirement did not have the effect it would today.

Minor Weapons of Monetary Policy

The Federal Reserve Board is left with two minor weapons that it can and does use to help maintain a stable economy. These are moral suasion and controls over the margin requirements from stock purchases.

Moral suasion, while not binding by law, can be a very potent influence on the banking fraternity. Appeals to the community spirit and threats, whether vague or otherwise, can frequently induce the member banks to conform to certain basic policies desired by the Federal Reserve Board, without the Board having to execute any of the legal weapons at its disposal.

The Federal Reserve Board has the power to regulate the margin requirements over stock purchases. By changing this requirement over credit in the stock market, the Board can restrict

the amount of money available for investment. When desiring to exert a contracting influence, the Board can require that an individual put up more money than previously required, in the purchasing of stock. This reduces the "investment base," and consequently, the total amount of money available for investment.

In summary, the effect of the Federal Reserve Board's actions, selling government bills, raising the discount rate, and raising the reserve requirements, will tend to discourage business expansion and therefore tend to slow down the economy, reducing the risk of inflation. Theoretically a business expansion should occur if the above actions were reversed. However, as Brainard[6] points out, expansionary measures promoted by the Federal Reserve Board are not certain of producing the desired expansion. Banks may have an adequate amount of loanable funds available, at attractive rates, but business alone will decide whether or not to take advantage of such loans for investment purposes. Business will attempt to expand only if there are favorable conditions for making profits. If business feels that it is not the right time to expand, then the cheap money available will do little good to promote and expansion. The usefulness of the Federal Reserve Board's action depends, to a large extent, on proper timing. If contracting measures are applied prematurely a healthy expansion may be converted into a serious break in the business cycle,[7] so

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[6] Harry G. Brainard, Economics in Action, (New York: Oxford University Press, 1959), p. 243.

[7] "Fight Over the Federal Reserve," Time, February 14, 1964, p. 85. Some critics of the Federal Reserve Board feel that an early tightening of money helped induce the 1958 and 1960 recessions. This argument is presently being aired in hearings held by the House Banking Committee.

serious a break perhaps, as to cause a recession.

It seems then, that the actions taken by the Federal Reserve Board can be useful in helping to slow down the economy, but by itself, is not sufficient to help in overcoming a recession. In order to do this we need additional action by the government.

Fiscal Policy of the Government

Monetary policy, as described in the first part of this chapter, affects primarily the investment schedule of the economy. The effect of fiscal policy, on the other hand is to affect primarily the government schedule of spending. The task of fiscal policy is to deal with taxes and public expenditures to help attain a high employment rate and growing economy, without price inflation.

The Automatic Stabilizers

Within the fiscal structure of the government there are several automatic stabilizers which tend to maintain the economy at a stable level. These stabilizers are immediately effective with any change in Net National Product and always tend to act counter to the economic trend.

The tax system in the United States is based primarily on income, both corporate and personal. With any change in the level of the economy an almost immediate change will occur in the tax

receipts of the government. As incomes rise, greater amounts will be collected by government in the form of taxes. Conversely, as incomes drop less and less will be collected by the government. In the case of a recessive tendency, less income will be earned, and, therefore, less will be paid in taxes. Now in the case of a recession, reduction in the dollar amount in taxes is the proper step to take to help reverse the recessive tendency of the economy. In the case of an inflationary trend, dollar amounts of income will rise, tax income to the government will rise, and again the economic swing will tend to be dampened.

A second stabilizer is our present system of unemployment compensation and other welfare transfers. In a recession people will begin to lose their jobs and have their normal source of income removed. However, without employment, most of these people are now able to draw a substitute income from the various state and federal unemployment compensation funds that have been set up. During periods of high employment, these funds would tend to grow; the principal source of money for these funds coming from both employees and employers. During recession years these funds are used to help tide over those not so fortunate in their job holding abilities. Thus consumption by the consumer can be maintained at some reasonable level. The sharp drop in consumer consumption associated with the business recessions prior to 1932 have been eased considerably by these unemployment compensation funds.

Farm aid programs also aid in stabilizing the economy. With falling agricultural prices the various programs set up by the government swing into operation. Essentially, the government buys in order to remove surpluses from the free market, thus maintaining a relatively good price for the small farmer. Theoretically, when inflation brews and prices soar, the government unloads the previously purchased agricultural goods and thus dampens the price swings. (The continued build-up of farm surpluses indicates that the small farmer has experienced an almost continual recession since World War II. The days of the small family farm seem to be limited.)

Corporate and family savings also tend to act in opposition to the economic swings. This is particularly true with the recessive swings in the business cycle. Corporations tend to maintain their dividend payments, thus pumping money into a depressed economy. Families will tend to maintain their former standard of living as long as possible. In order to do this they must draw on family savings.[8]

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[8] Family savings differ quite drastically from savings in an economic sense. In economics, savings is non-consumption as described by non-buying or non-investing. Family savings, as thought of by the economist is an investment. (Banks can lend on savings deposits.) What occurs in a recession is a reduction in family savings, which in actuality is a reduction in the investment schedule. The consumption schedule is increased by the same amount as the decrease of the investment schedule. The effect of this transfer of "spending" is problematical. Will the increase in the consumption schedule stimulate business to seek investment from other sources? Or will the decrease in investment discourage business so that it will not seek to expand with a moderate increase in consumption? This money is "savings" only when the bank cannot lend it.

The built-in stabilizers are effective in acting to offset the economic trend; however, they are not sufficient in their own right to fully dampen the swings of the business cycle. Additionally, each reduction of the Net National Product by the reduction in taxes also reduces the size of the "multiplier effect." Instead of a three or four to one ratio, we now have a 1.5 or two to one ratio. The built-in stabilizers tend to wipe out part of the fluctuation of the economy but not completely. Discretionary monetary policy, as exemplified by the actions of the Federal Reserve Board, coupled with discretionary fiscal policy are required to remove remnants of the recession.

Discretionary Fiscal Policy

The three principal weapons at the disposal of the government in the realm of discretionary fiscal policy are:

1. Varying public works and other expenditure programs,
2. Varying transfer expenditure programs, and
3. Varying tax rates cyclically.

Briefly, each of these weapons can be used to combat an impending recession.

Varying Public Works and Other Expenditure Programs

In the history of governmental action to help the country recover from an economic depression, prime reliance was placed on public works programs. These projects consisted essentially of

make work projects, such as road building without the use of modern earth-moving equipment, leaf raking in public parks, construction of monuments and other projects of limited usefulness. This was thought to be the only safe way to help the country without getting on the treadmill to financial ruin. This concept has since given way to one of providing useful work; the accomplishment of things that need to be done.

If it appears that the recession is to be of a relatively short duration, many economists believe that antirecession type public works should not be begun. The thinking here is that it takes a long time to get a building started, and that often as not, when full expenditures are finally brought to bear by this project, the recession is over and the increased money spent will now tend to produce an inflationary trend. This "over correction" of the economy must also be avoided.

This is not to argue against needed public works. These should be planned and accomplished for their own sake and should not be used as a pawn in the fight for a stable economy. A recession should not be the whip to spur needed and worthy programs. Many planned public works can, at the first sign of recession, be speeded up so that they can act in the best interest of the country and fight the recession. The various government agencies have on the shelf blueprints to be used in the event of a depression. The preliminary spending is usually accomplished and

all that need be done is to hire the personnel to work on the project.

Any antirecession public works should be planned so that it can be accomplished in a relatively short time span. Any project which would take longer than eighteen months should not be considered as a possible project for antirecession use. Since the Korean police action we have had three recessions. In each of these the recovery period has been less than eighteen months. "Over-correcting" the economy would result if longer term projects were considered and used.

Varying Transfer Expenditure Programs

In addition to the built-in stabilizers of unemployment compensation, there is much that government can do in welfare programs in helping to ease the economic swings. For example, during inflationary trends, scheduled issuance of funds such as veterans' bonuses, could be delayed and during recessive periods these payments could be speeded up or even increased in total dollar amounts. Unemployment compensation already being utilized in a depressed period, could be extended and again the dollar amounts increased. The program could be enlarged to encompass a greater segment of the population. The one drawback to the increasing of welfare payments is that, once raised, it is very hard to get them back to the prerecession level. Emergency programs

enacted to alleviate short-term effects almost never disappear after the emergency is over.

Varying Tax Rates Cyclically

In order to prevent or to slow down an existing recession reduction of taxes is in order. While this occurs to some extent, as an automatic effect of reduced income,[9] the reduction of the existing tax rates, or the reduction of the existing tax base, or both, would materially help the economy. The primary disadvantage to the use of this method is the pace at which Congress moves. The tax reduction[10] enacted in February, 1964, was first urged by the President in January, 1963. The advantage, of course, is that once enacted and signed by the President, increased paychecks are evident at the very next payday. Another disadvantage is that once taxes are reduced, it is difficult to raise them should the need arise. The government should in good times have high taxes and budget surpluses (to prevent inflation), and during impending bad times, lower taxes and budget deficits. This concept is extremely difficult to present to the average voter. He does not see why, in good times, the government should take such a large slice of his weekly paycheck. It might be easier

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[9] Samuelson, p. 391.

[10] This tax reduction is designed to maintain a buoyant economy, preventing any chance of a recession for the immediate future.

to suffer through bad times without a tax reduction than have to fight inflation with a tax rise upon the return of good times.

Summary

In the last few pages a generalization of many economic concepts has been made. An attempt has been made to introduce the reader briefly to several of the more important methods that government has to help in the process of maintaining economic stability, full employment, and a sound growth rate. Many of the measures that government can use are still controversial.

In review then, the government can affect the supply of money and credit through the Federal Reserve System, with open market operations, changes in the discount rate, and changes in the legal reserve requirements. The Federal Reserve Board members act as if they were members of the board of directors of a national bank. Though the United States does not have a national bank as such (member banks are separate, private institutions), the net effect of the Federal Reserve system is one that acts as a national bank. In good times this system tends to contract the amount of money and credit available to prevent inflation, and in bad times expand the amount of money and credit to prevent recession.

The fiscal policies that we have touched upon deal primarily with the alleviation of recessive tendencies in the economy. To do this the government usually spends money in an attempt to keep the Net National Product at or near normal levels. Tax reduction makes available more money to the consumer and tends to induce greater consumer spending. It effectively, therefore, can be considered to be a "government spending program."

This then is how government attempts to maintain a stable economy. An examination of how the state of the economy is determined is now in order.

CHAPTER II

DETERMINATION OF THE STATE OF THE ECONOMY

Thus far a discussion of some of the things that government can do to help ease the burden of recession periods for the citizenry has been presented. This chapter will be devoted to a brief explanation of the determination of the state of the economy. How is the degree of severity of a downturn in the economy determined? How is the trough of the economic contraction determined? How soon after occurrence can the economic trends be noted?

Much of the information presented in this chapter is derived from several different publications published under the auspices of the National Bureau of Economic Research. This organization has, as its objective,[1] "to ascertain and present to the public important economic facts and their interpretation in a scientific and impartial manner."

Essentially, the state of the economy is determined by analyzing different statistical information which seem to indicate

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[1] The object of the organization, along with some basic policy information, is published in every publication printed under the name of the National Bureau of Economic Research.

what is occurring within the economy. For example, when employment goes up we are apparently experiencing good times, and conversely, when employment drops we are apparently experiencing poor times. This is an over-simplification of the determination of the state of the economy but illustrates the general concept involved when dealing with economic statistics. Not only must there be statistics, but they must show whether "good" times or not are indicated, and there must be an understanding as to the meaning of trend changes of the particular statistic involved. In addition, a determination of which statistics are relevant to an analysis of the economy must be made. Of the many statistics available, several seem to lead the economy, several seem roughly coincidental, and several seem to be lagging the economy. The basic problem is to identify each group of statistics and relegate them to their proper place within the economic spectrum.

The statistical information used by the economist are made available from several different private and government sources. Among these are the Department of Commerce, Bureau of Labor Statistics, Federal Reserve Board, Dow-Jones & Company, Dun and Bradstreet, and the Association of American Railroads. This list is by no means complete, and represents only some of the sources which generate statistics useful to the economist for his study.

The general procedure used to determine what information is valuable is to relate the statistical information available to

the known ups and downs in the economy over as long a time span as possible. Not only does this process tend to identify statistical trends with the economy, but after careful study helps to refine the timing of the events in any business cycle. Once the information has been aligned with the economy, a determination of which indicators lead, lag, or are roughly coincidental to the economy, can be made. These indicators can then be used, when matched against current statistics, as a measure of the present economy. By closely watching the trends of these statistics, an estimate as to the future trends of the economy can be made. A summary of selected statistical indicators has been published by the Bureau of Economic Research.[2] Some statistics go back as far as 1879, and have been accurately correlated with the economic trends since that time.

The list of current indicators mentioned above is a tentative one only. The investigation into the economic reliability of the data collected, and its relation to the economic situation of the country is a continuing one. Often an indicator which normally leads the economic trends might in a particular recession not follow the pattern expected. The reasons for specific exemptions to the historic trends seem to be controlled by conditions peculiar to the economy at the time of the economic turn. These

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[2] Geoffrey H. Moore, Statistical Indicators of Cyclical Revivals and Recessions, National Bureau of Economic Research Occasional Paper 31, (New York: The Gallery Press, 1950), p. 63.

conditions cannot be predicted with sufficient accuracy to state which of the indicators will not respond as it should. For example, in both the 1953-1954 and 1948-1949 recessions residential building displayed great strength, while in 1937-1938 and 1929-1930, considerable weakness. Such differentiation of the strong and weak sectors of the economy during a recession is essential to appropriate diagnosis and proper corrective action policies required to promote a prompt and healthy revival of the economy. Accurate and prompt data on comparative changes in personal and corporate income tax payments, unemployment benefits, government (federal, state, and local) expenditures, public works contracts, interest rates, money supply, and Federal Reserve operations would enable one to appraise the strength and timing of either "built-in" or deliberate leveling policies. Historical patterns and relationships ought not to be transplanted mechanically. They can and should be used to help formulate realistic appraisals of existing situations.

Another problem is the determination of a cyclical contraction of the economy. When are we in a recession? For example, the period 1951-1952 could be considered by many to be one of "contraction." After the upsurge of 1950, caused by the start of the Korean War, many areas of the economy suffered setbacks. The total rate of the economy had slackened measurably. However, there was no overall decline in output, income or employment, or a

rise in unemployment. Defense industries continued to expand rapidly. Therefore, this period was not considered to have experienced a business contraction, even though segments of the economy were "recessed." This is analogous to the present day situation relative to the depressed areas along the Appalachian mountain chain. While the rest of the country is experiencing boom, this section of the country has wallowed in the depths of depression. The total of the statistical indicators for the country as a whole indicate that we are experiencing "good" times.

Of the many bits of statistical information available, some of them are more reliable or trustworthy than others. A series of statistics is more useful as an early indicator of trends in general business, other things being equal, when:[3]

1. The longer its average leads at past turns in the economy.

2. The more uniform are these leads in occurrence and length.

3. The closer its specific cycles come to having a one-to-one correspondence to business cycles.

4. The more clearly defined its specific cycles.

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[3] Wesley C. Mitchell and Arthur F. Burns, "Statistical Indicators of Cyclical Revivals," Business Cycle Indicators, Vol. I. ed. Geoffrey H. Moore, National Bureau of Economic Research, (Princeton: Princeton University Press, 1961), p. 173.

5. The less intense its erratic movement in comparison with the amplitude of its specific cycles.

6. The fewer the changes in the direction of its month-to-month movements.

7. The smaller and more regular the seasonal variations that have to be "eliminated" before the specific cycles can be studied.

8. The larger the number of past turns covered by the series.

9. The farther back in time any irregularities in conformity to business cycle revivals occurred.

10. The broader the range of activities represented by the series.

11. The more stable the economic significance of the process represented.

However, things seldom are equal. When a series rates high, as judged by some of the above criteria, they tend to rate very low in other critical areas. Hence any list of statistical "leaders" in economic forecasting must be annotated as to their strong or weak points. For example (see below), some of the statistics, with annotations, as generated in a 1938 study,[4] show the wide range of information that must be considered before

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[4] _Ibid._, pp. 174-178.

evaluating the "worth" of any statistic, and its resultant place in the total economic picture. Of what value would statistics with the following annotations be in determining the economic trends?

DOW-JONES INDEX OF INDUSTRIAL STOCK PRICES

Average lead seven months. A long series; covers ten business cycles. No lags, but one coincidence. Timing ranges from -18 to 0 months. Erratic movements mild. Reversals of direction relatively infrequent. No seasonal. Skips the cyclical decline of 1926-1927, but shows marked retardation in 1926 and early 1927. Source: Wall Street Journal.

INDEX OF BUSINESS ACTIVITY, AMERICAN TELEPHONE AND TELEGRAPH CO.

Average lead two months. Covers fifteen cycles, maintaining one-to-one correspondence. Eight leads, one lag, seven coincidences. Timing range, -8 to +1. Erratic movements mild, and changes of direction infrequent. Source: American Telephone and Telegraph Company, Summary of Business Conditions.

TON-MILES OF FREIGHT HAULED

Average lead four months. No lags or coincidences. One-to-one correspondence. Covers five cycles, one of them prewar. Timing range, -11 to -1. Erratic movements mild. Reversals of direction

relatively infrequent. Seasonal relatively small and stable. Principal defect is that three of the seven leads are only one month. Source: Interstate Commerce Commission, Freight Train Performance of Class I Steam Railways.

FACTORY EMPLOYMENT, TOTAL

Average timing 0. Timing range very narrow, -2 to +1. Two leads, two lags, two coincidences. One-to-one correspondence. Erratic movement mild, changes in direction exceptionally infrequent. One of the most consistent indicators of revival. Chief limitation is that the record covers only five cycles. Source: Federal Reserve Bulletin.

Though the above was published originally in 1938, this type of information, continually updated with data from the latest economic swing, are the basic ingredients for a determination of the state of the economy, at any given time. The variations from the "norm" may often prove to be significant in discovering new truths about our economy. During the last two recessions, prices, which normally decline, advanced. In addition, total disposable income did not appreciably decline, even though unemployment did rise. This last item can be explained in part by the transfer of funds in the form of unemployment compensation. While it is still too early to tell, it will be important for future generations to

know if these conditions of rising prices, climbing unemployment, and relatively stable personal income, during recessive periods of the economy are to become a permanent feature of a contractional economic period.

Assuming that this trend becomes a permanent fixture of economic contraction in business, the basic question raised appears to be one of controlling the inflationary trend, and still combat the recessive tendency. How can total inflationary pressure be controlled within acceptable limits, if prices continue to rise during a recession? Must we curtail unemployment compensation, set wage ceilings, or both, during recessions, to reduce the amount of money available for consumption? Must we set price controls during recessive periods? This type of thinking, while theoretical in nature, is representative of that which must be considered when any unusual performance of the statistical indicators of the economy are noted.

The knowledge and experience of this writer are not sufficiently developed to completely analyze the statistical data available for the determination of the state of the economy for the fiscal years 1954 through 1963. The periods of contraction of the economy, as determined by the National Bureau of Economic Research, have been used to denote the recession periods discussed in the remainder of this paper. These periods are:

July 1953 to August 1954
July 1957 to April 1958, and
Mid 1960 to Early 1961.

These periods represent periods of economic contraction only, and do not represent that period from peak to the regaining of the prerecession peak. Exact dates are not available for the oast recession period listed above. Complete evaluation of the statistical data for this recession will be published at a later date.

CHAPTER III

EXPENDITURES BY THE NAVY, FISCAL 1954 THROUGH FISCAL 1963

In this chapter the basic material to be analyzed will be presented. The general format will include a brief description[1] of the appropriation title under discussion so that the reader can get a general idea of the items that money is spent for within the different categories. Some of the appropriation titles appear to be, at first glance, misleading. For example, fuel for ships should logically be considered as a problem for supply and logistics. In tactical decision-making this is the connotation given to the problems engendered by the need of ships for fuel. However, for appropriations purposes this item was considered under an operational category. Part of this problem of confusion of titles has been alleviated in the appropriations bills of 1960. In this legislation many of the appropriations were combined into one operating category, namely, Operations and Maintenance, Navy. This new title includes virtually every item that might affect the immediate operating capabilities of the fleet. Supply of materials

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[1] Summary descriptions of the various titles are developed from Department of the Navy Budget Digest, NAVEXOS P-1355 (Washington: Government Printing Office, Fiscal years 1957 through 1964), issued by the Office of the Comptroller, Navy.

is now included in this appropriation title and no longer warrants a separate title.

Under this appropriation title many of the formerly separate items were consolidated into activities of the new appropriation title. Six of these under detailed examination by this paper, were so included, and, therefore, detailed examination of the monies spent in the original appropriation title area are not available. The tables and charts for these titles were, therefore, terminated at the end of fiscal year 1959. The information contained in them will be useful only in examining the spending of the Department of the Navy for the period fiscal 1954 through fiscal 1959, inclusive. These six appropriation title areas are:

Ships and Facilities
Ordnance and Facilities
Naval Personnel, General Expenses
Service-Wide Supply and Finance
Service-Wide Operations
Aircraft and Facilities.

In order to avoid unnecessary repetition in describing what money is spent for in the above categories, no further mention will be made of the consolidation of the several titles. Appropriate footnotes will appear where this consolidation had taken place.

The above expenditure functions have all been included in the Operations and Maintenance category. The old titles are being allowed to continue until all monies previously appropriated and apportioned have been completely expended.

Time Span Considerations

In doing the initial research into the factual material available on Naval expenditures, it was found that there was very sketchy expenditure data (from the layman's point of view, not an accountant's) available for the years prior to fiscal 1950. All of the accounts were kept by appropriation symbol, and in order to determine any spending data on a monthly basis, a detailed examination of daily expenditures by appropriation symbol would be required. This data, in turn, would have to be totaled and translated from appropriation symbols into appropriation titles. To accomplish this with any degree of accuracy would require the expenditure of resources beyond the capabilities of this writer. Therefore, a tentative starting point was established beginning with fiscal year 1950.

It quickly became apparent that the material contained in these records for fiscal 1951 through 1953, were not representative of peacetime spending by the Navy. The Korean police action from June, 1950 to July, 1953, required the expenditure of many millions more than could normally be expected during peacetime. Fiscal year

1950, alone, would not be indicative of any spending trend by the peacetime Navy. The first year then that might reflect any degree of normalcy in spending would be fiscal 1954. This then was the first year chosen which would be presented for detailed examination. Even here, some of the categories of expenditures considered still reflect the relatively high rate of spending associated with the military action in Korea.

The last year that complete information is available is fiscal 1963. Some of the figures initially presented for this year may have to be updated as the accounts for the fiscal year are finally closed out; however, there is no indication,at this writing, which accounts, if any, will require an adjustment. Normally any changes to the originally published figures will be small. For purposes of this paper the figures given for fiscal 1963 are considered to be final, and any changes made in the future because of accounting adjustments would not materially affect the considerations and conclusions surmised in Chapter IV.

From the above it can be seen that for the purposes of this paper the best time span available for study is for the period of fiscal 1954 through fiscal 1963, inclusive.

Considerations for Choosing Expenditure Titles

There were several considerations given to the titles chosen for examination. An attempt was made to pick appropriation titles that could be easily followed for the entire period under

consideration. This, of course, was not possible because of the major change in the presentation of material with fiscal year 1960, and because of the considerations listed below. In one case (Aircraft and Related Procurement), a new title appeared in 1960, designed to eventually replace the old appropriation title. For the years 1960 through 1963, the old and new titles had to be combined in order to present a true picture of the expenditures in this area.

Another consideration was the idea of presenting material that would logically balance. We would normally expect that, without a major military crisis, monies spent for military salaries would be maintained at a reasonably level rate. The same concept would hold true for the spending of funds for military hardware items such as ordnance or aircraft procurement. The only changes expected would be those reflecting the changing purchasing power of the dollar or for pay raises. There are other areas, within the sphere of military influence and control, where a variation of the spending rate could be tied in very closely with the economy; areas that by design could be used not only as a tool for military use but as a tool for economic use as well. Examples of this would be Naval Reserve forces, certain military construction, and military construction for Reserve forces. Expansion or contraction of the Reserve component could be a very effective way of making more or less money available to the economy.

The propensity to consume would be fairly high in this sector. Military construction, both Reserve and non-Reserve, could be controlled in much the same manner as Public Works is controlled in other government spending. The short run military posture would probably not be materially hurt by financial manipulation in these areas.

A third consideration was to try and pick areas where the dollar amount of expenditures, or lack of expenditures, would tend to bear heavily on the economy. Certain categories, with expenditures of half a million per year, do not have as great an economic effect as other areas which spend hundreds of millions monthly.

The three basic considerations then are continuity of expenditures, possible manipulative nature of expenditures, and dollar value of expenditures.

Format

The presentation of the expenditure data will be as follows. First, a brief discussion of the expenditure title, giving the general areas in which money can be spent. Second, a table of expenditures for each of the fiscal years, 1954 through 1963, inclusive (through 1959 inclusive for the six previously listed titles), for selected titles, expressed in thousands of dollars. Third, a graphic presentation of the average spending, with a view to spotting any trends in this spending. The

recession periods which have occurred during this period, as determined in Chapter II, will be indicated on both the graph and table of expenditures.

The construction of the graph requires an explanation. It will be noted that most of the monthly expenditures figures, as presented in the respective tables, do not fall exactly on the curve of the accompanying graph. The monthly expenditures in many cases fluctuate widely from month to month. A graph with very widely fluctuating figures would be difficult to follow, and any trends within the figures that make up the graph would be difficult to establish. Therefore, the original graphs were averaged so as to present the material in an easily readable form. Figure 2 shows how this was accomplished. It will be noted that any trend can be very quickly determined by using this technique. Occasionally, there is a very large expenditure, compared to the normal spending for the title, which is difficult to average in. When this occurs the extraordinary figure is temporarily excluded from the formation of the curve, but then indicated as a vertical line from the average curve to the point represented by the level of spending for that month. This is shown in Figure 2 by the spending for the month of May.

The curve shown in Figure 2 is presented to show how the succeeding graphs were prepared and does not represent any particular expenditure title or any particular fiscal year.

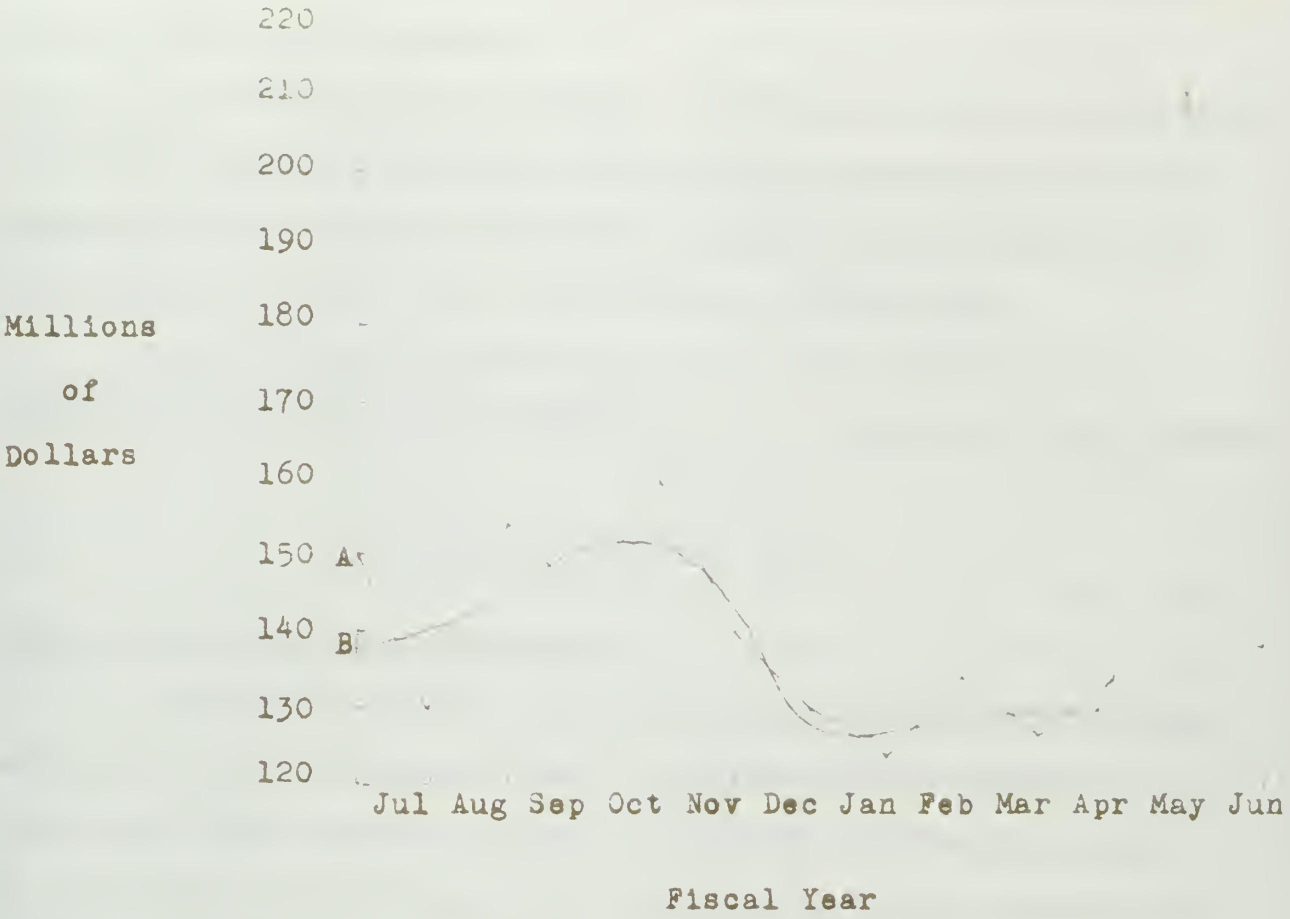


Figure 2. Graphic Explanation of How Appropriation Title Graphs Were Prepared

Line A indicates the actual expenditures for the month; line B the resultant averaged curve. The averaged curve only appears on the accompanying graphs.

In addition to the monthly summaries by title, there will be several additional tables which will be self-explanatory in character. They will, in general, reflect yearly summaries of expenditures for the time period under consideration.

The left-hand ordinate for all of the charts is in millions of dollars. The horizontal axis represents fiscal years.

Military Personnel, Navy

Activity 1 - Pay and Allowances:

Provides officers and enlisted personnel on active duty, midshipmen at the Naval Academy, Aviation Cadets, Officer Candidates and Aviation Officer Candidates with basic pay and, as applicable, proficiency pay, incentive pay for hazardous duty, subsistence and quarters allowances, station and special allowances; special pay for unusual responsibility, salvage diving, physicians and dentists, sea and foreign duty; payment for unused leave, severance pay, mustering out pay, clothing allowance for officers, reenlistment costs for enlisted personnel, and the initial outfit of clothing for Regular Navy personnel upon first enlistment or broken service reenlistment upon change in status requiring a special type of uniform, for naval

reservists upon the recall to active duty, and for maintenance allowances. Also provides initial clothing and maintenance allowance for aviation cadets, and initial clothing for officer candidates and aviation officer candidates. Further, provides the government's cost of providing social security coverage for military personnel.

Activity 2 - Subsistence in Kind:

Provides subsistence in kind for active duty enlisted personnel, midshipmen and aviation cadets when they do not receive a cash allowance for subsistences, and inactive retired and Fleet Reserve enlisted personnel when under treatment in Federal hospitals. Also provides for replacement of emergency rations, rotation of operational rations, and trial and emergency rations for special operations.

Activity 3 - Movements, Permanent Change of Station:

Provides for travel, transportation, and dislocation allowances of military personnel on active duty and their dependents, household effects, and automobiles as follows: Officers and enlisted personnel from home to active duty, between permanent duty stations, and from active duty to home; midshipmen initial travel, between training activities and to home on separation; aviation cadets from home or active duty to training

between training activities and separation travel; officer candidates and aviation officer candidates from home to first duty station and separation travel.

Activity 4 - Other Costs:

Provides for interest on deposits made by enlisted personnel, death gratuities to beneficiaries of active duty military personnel, mortgage insurance premiums and claims for back-pay under Public Law 85-255.

Reserve Personnel, Navy

Activity 1 - Reserve Personnel:

Provides funds for drill pay and clothing allowances for members of the Naval Reserve assigned to or associated with drilling units; command pay for performance of administrative duties; training duty pay, travel, subsistence and disability and death benefits as applicable for personnel on active duty for training.

Activity 2 - Reserve Officer Candidates:

Provides funds for pay, allowances, subsistence, travel and individual clothing for personnel undergoing training as officer candidates in the Naval Reserve Officer's Training Corps and Reserve Officer Candidates programs, and retained pay of commissioned officer students in the Naval Aviation College Program.

TABLE 8

MONTHLY EXPENDITURES FOR MILITARY PERSONNEL, NAVY
($000)

[illegible]	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
[illegible]	[illegible]*	[illegible]*	215,459*	201,562*	185,630*	226,856*	237,989*	181,409*	194,222*	205,796*	213,200*	236,844*
[illegible]	[illegible]*	155,942*	[illegible]	191,427	[illegible]	217,906	171,392	[illegible]	201,543	194,939	209,746	228,489
[illegible]	[illegible]	214,941	[illegible]	190,750	[illegible]	226,175	185,402	196,289	213,744	195,882	206,669	229,160
[illegible]	[illegible]	221,239	104,711	229,383	[illegible]	210,505	194,282	203,582	191,283	216,750	213,540	208,654
[illegible]	[illegible]*	[illegible]*	187,676*	220,798*	184,553*	213,429*	208,383*	186,881*	193,585*	206,609*	194,249	236,520
[illegible]	[illegible]	[illegible]	205,575	225,029	177,940	[illegible]	216,501	198,414	212,360	211,636	202,304	237,641
1960	[illegible]	[illegible]	[illegible]	221,101	[illegible]	216,802	186,944	215,191	220,297	194,654	216,414	228,356
1961	187,420	[illegible]	[illegible]	207,591	[illegible]	[illegible]	205,674	[illegible]	222,154	179,362	231,734	234,578
[illegible]	194,643	[illegible]	201,644	245,446	[illegible]	219,882	216,395	224,350	229,819	225,858	231,059	241,380
[illegible]	[illegible]	[illegible]	202,825	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	221,049	238,988	232,568	226,842

Figure 3

Military Personnel, Navy

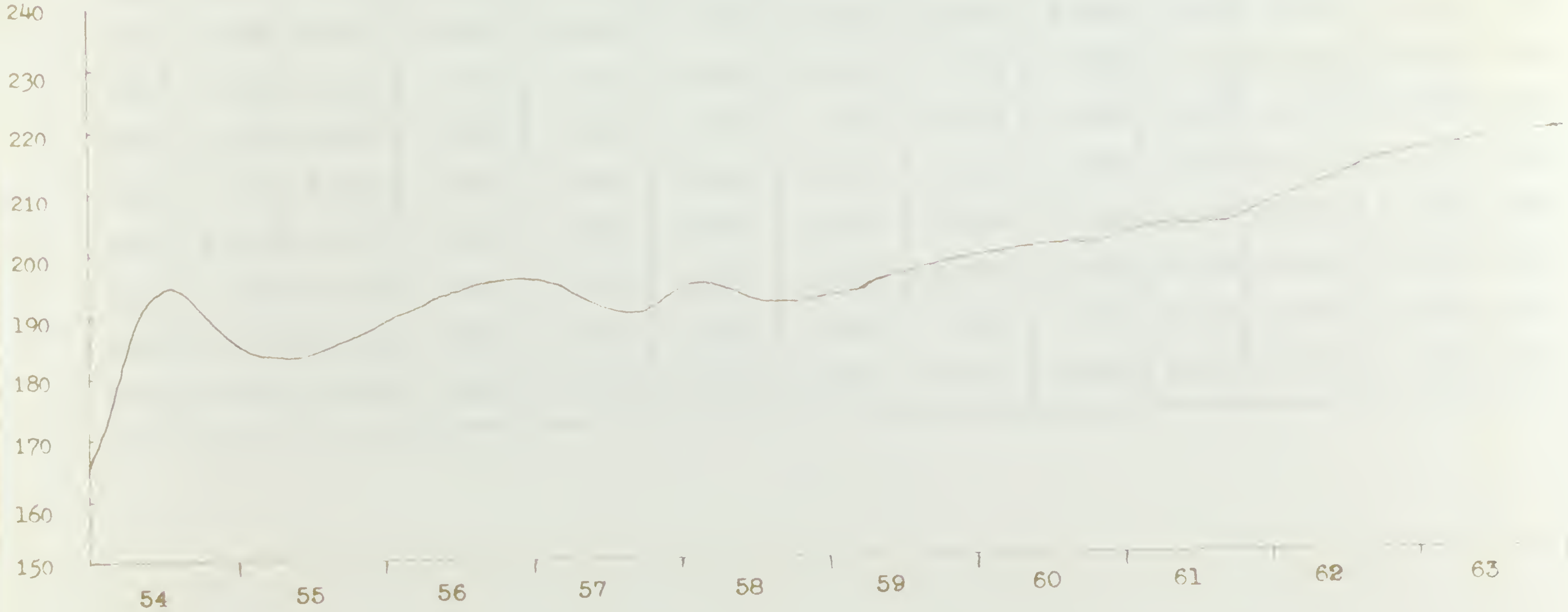


TABLE 3

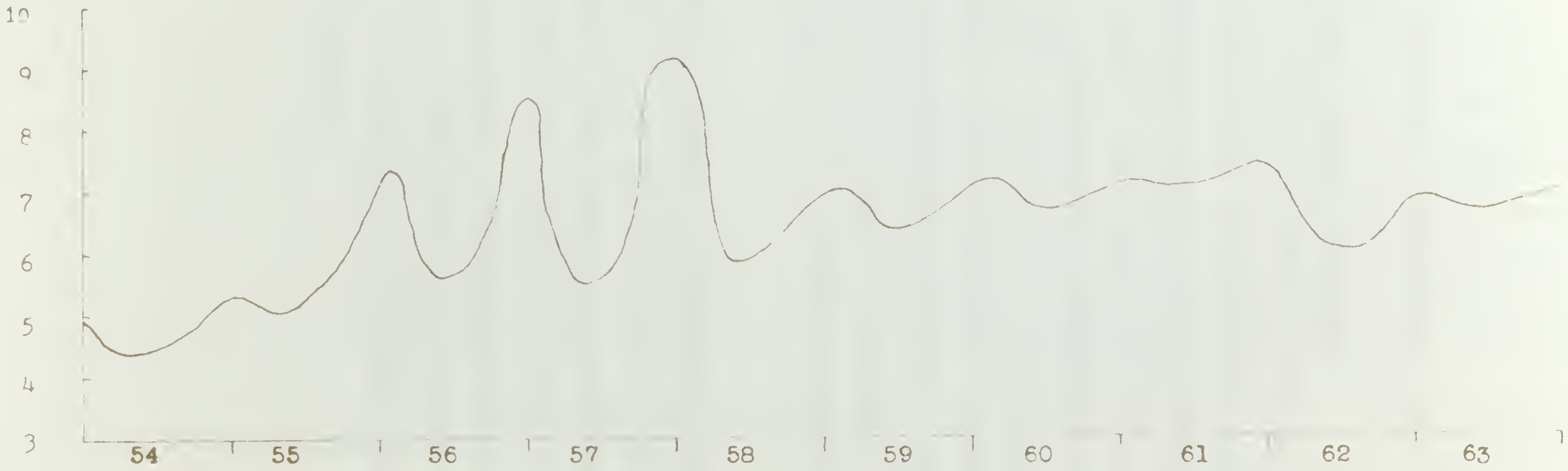
MONTHLY EXPENDITURES FOR RESERVE PERSONNEL, NAVY
($000)

Fscl Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1954	8,207*	7,457*	1,817*	5,828*	4,532*	1,627*	5,390*	4,366*	3,270*	7,658*	4,959*	4,392*
1955	7,866*	7,749*	2,885	7,132	5,125	2,110	7,124	4,653	2,834	7,498	7,118	5,596
1956	8,808	10,430	4,133	6,925	7,225	2,543	6,591	6,686	3,382	8,850	7,390	7,362
1957	9,478	10,362	3,700	7,413	7,130	2,277	7,470	6,852	4,378	10,176	6,971	7,198
1958	9,619*	11,528*	3,159*	7,492*	7,012*	4,036*	7,739*	7,184*	3,558*	9,763*	6,766	5,303
1959	9,373	8,127	3,653	9,032	6,465	2,614	7,600	8,682	2,851	10,751	6,127	7,744
1960	9,825	10,233	3,126	8,881	5,712	2,161	8,589	7,040	3,447	10,270	7,956	5,094
1961	9,599	10,704	3,144	8,749	5,880	2,698	8,892	8,056	4,158	10,072	8,381	4,982
1962	10,840	10,535	3,812	9,389	6,011	2,295	7,624	6,258	3,661	9,911	5,362	6,037
1963	10,293	8,120	3,050	8,739	5,470	1,892	9,238	5,166	4,670	10,574	6,103	5,825

*

Figure 4

Military Personnel, Reserve



Aircraft and Related Procurement, Navy

Activity 1-7 - Aircraft and Related Equipment

These activities finance procurement of new aircraft to support attack carrier air groups; carried-based antisubmarine warfare groups; antisubmarine warfare land and seaplane squadrons; and Marine Air Wings; together with their supporting components and spare parts; the cost of modifying and modernizing in-service aircraft; and other related items such as aircraft production tools and equipment, and aircraft training equipment for simulating operational, tactical, and maintenance problems. Procurement requirements for new aircraft are based on projected aircraft operating programs and replacement of losses caused by attrition and obsolescence.

Activities 8-12 - Missiles, Drones, and Related Equipment

The procurement of all Navy missiles for fleet outfitting and training and of related spare parts and modification is financed under these activities. Related projects such as powered and unpowered target procurement, antisubmarine drone procurement, and missile industrial facilities are also financed here. Funds are also provided for the procurement of hardware associated with the Transit navigation system.

TABLE 4

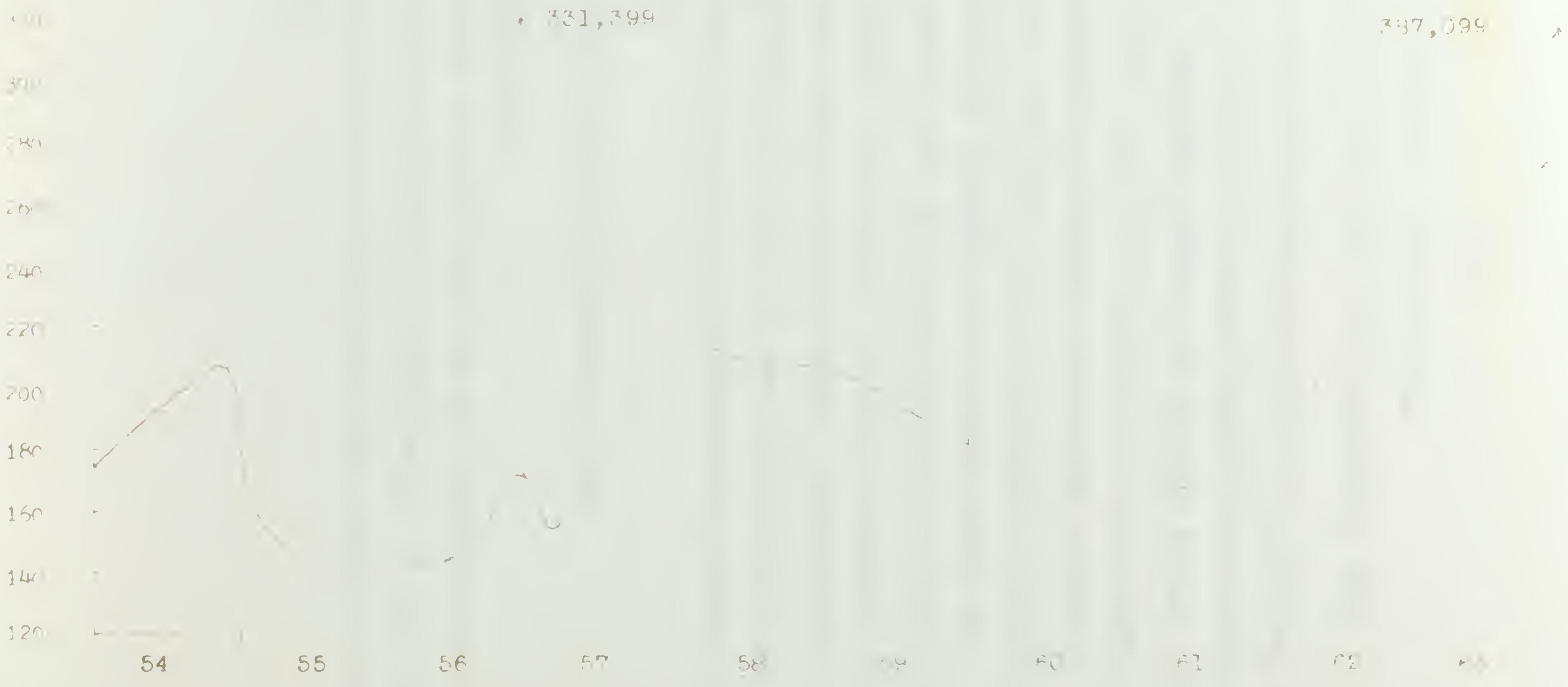
MONTHLY EXPENDITURES FOR AIRCRAFT AND RELATED PROCUREMENT
($000)

Fscl Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1954	157,166	191,811	183,438	217,879	165,414	208,297	144,264	192,723	231,217	172,789	222,013	300,617
1955	143,333	156,566	135,168	186,472	161,582	165,216	120,468	155,048	168,102	121,700	152,960	167,895
1956	94,405	199,955	145,954	134,148	105,340	177,084	119,006	128,686	165,888	188,698	181,086	331,399
1957	110,410	169,736	131,115	168,661	197,053	170,798	185,892	194,258	188,782	224,044	202,093	229,922
1958	209,857	218,368	185,644	194,200	181,007	223,454	252,548	236,848	192,147	179,516	177,740	258,254
1959	221,942	178,022	190,740	225,901	201,688	208,852	192,417	188,497	177,549	184,035	174,522	297,820
1960	158,191	159,322	165,580	189,250	148,977	207,715	141,670	135,651	170,751	165,083	162,628	222,280
1961	155,050	153,397	169,705	161,541	184,209	207,723	145,399	185,962	174,620	171,547	184,566	174,351
1962	162,874	148,686	190,954	184,143	232,475	246,754	228,097	213,030	256,499	232,471	248,098	257,241
1963	214,158	217,773	213,335	240,287	289,173	256,381	295,007	236,354	260,628	270,520	387,099	137,417

FY 1961 to end. Procurement of Aircraft and Missiles, Navy added into Aircraft and Related Procurement Appropriation. Initial heading is being phased out

Figure 5

Aircraft and Related Procurement, Navy



Aircraft and Facilities

(Now Activity 2 Operations and Maintenance, Navy)

Aircraft and Facilities provides for the operating costs of Naval Aviation, including air combat forces of the Regular Navy and Marine Corps, supporting service and training forces, Naval and Marine Air Reserves, naval air stations and such related activities as procurement of weather instruments, technical publications, ground equipment, aerial photographic equipment, maintenance of shipboard catapults and arresting gear, and procurement of special fuels for evaluating newly developed power plants. Funds requested will support aircraft operating with the highly mobile attack carrier striking forces, antisubmarine carrier forces, antisubmarine land and sea patrol squadrons, carrier forces, Marine air wings, and miscellaneous combat and support squadrons.

Shipbuilding and Conversion, Navy

Activity 1 - Polaris Ships

This activity provides funds for the construction of nuclear-powered Polaris submarines. Additionally, it funds the construction and conversion of tenders and cargo ships to support Polaris submarines.

TABLE 5

MONTHLY EXPENDITURES FOR AIRCRAFT AND FACILITIES, NAVY
($000)

Fscl Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1954	72,750*	73,179*	73,131*	76,167*	74,133*	66,014*	66,079*	72,607*	76,573*	81,184*	77,745*	99,541*
1955	49,399*	49,791*	59,137	59,673	55,366	62,406	60,261	54,319	70,864	57,974	58,722	80,990
1956	51,488	57,044	71,976	55,919	59,141	63,297	53,460	64,619	74,345	59,715	74,150	80,323
1957	54,390	78,138	65,227	78,057	73,058	66,102	79,097	72,158	78,389	77,369	81,283	77,283
1958	70,261*	80,563*	67,477*	75,890*	67,886*	69,568*	75,286*	70,858*	68,888*	66,014*	68,981	67,368
1959	75,228	72,620	69,782	79,735	63,218	78,960	76,516	66,660	70,278	78,099	73,141	77,121

Absorbed into Operations and Maintenance, Navy.

Figure 6

Aircraft and Facilities

Activity 2 - Other Warships

This activity provides funds for the construction, modernization and conversion of all major combat type ships such as aircraft carriers, submarines (other than Polaris), frigates, and destroyers, including their initial armament and electronics equipment.

Activity 3 - Amphibious Ships

This activity finances the construction and conversion of all amphibious assault ships.

Activity 4 - Mine Warfare and Patrol Ships

This activity finances the construction and conversion of all combat type ships not otherwise classified. Included are escort ships and mine counter-measures support ships.

Activity 5 - Auxiliaries and Crafts

This activity finances the construction and conversion of support ships to provide food, fuel, and ammunition. Included are supply ships, fleet oilers, ammunition resupply ships, cargo ships, research ships and command ships.

Ships and Facilities

(Now Activity 3, Operations and Maintenance, Navy)

Funds are included to support ships of the active fleet, ships in the Naval Reserve training program, and minimum

TABLE 6

MONTHLY EXPENDITURES FOR SHIPBUILDING AND CONVERSION, NAVY
($000)

Fscl Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1954	*52,347	*64,882	*71,146	*61,003	*60,624	*70,871	*65,593	*56,619	*77,669	*63,338	*68,234	*89,061
1955	53,902	66,060	65,570	61,999	66,232	75,246	64,670	72,488	78,190	71,230	68,691	88,219
1956	57,250	66,387	69,414	76,160	73,601	72,161	80,502	73,693	80,105	82,182	78,774	96,438
1957	55,257	73,643	61,132	70,246	68,108	81,600	74,876	77,666	88,356	83,520	98,110	84,395
1958	*83,370	*85,257	*97,134	*91,621	*88,983	*110,696	*124,596	*98,222	*410,129	*98,398	119,637	106,648
1959	135,213	96,745	100,495	340,399	109,728	121,493	126,333	112,075	320,466	122,599	124,579	127,074
1960	117,794	111,327	360,099	108,766	238,848	183,894	109,278	91,702	121,165	165,256	111,811	-356,987
1961	132,071	143,336	145,306	148,707	159,112	177,090	144,110	163,241	187,968	155,140	160,272	191,902
1962	138,534	151,428	150,118	140,616	170,897	163,252	157,202	161,274	154,420	168,591	197,973	207,715
1963	135,855	162,810	141,992	158,247	173,348	152,204	151,705	161,766	162,846	189,500	309,956	650,592

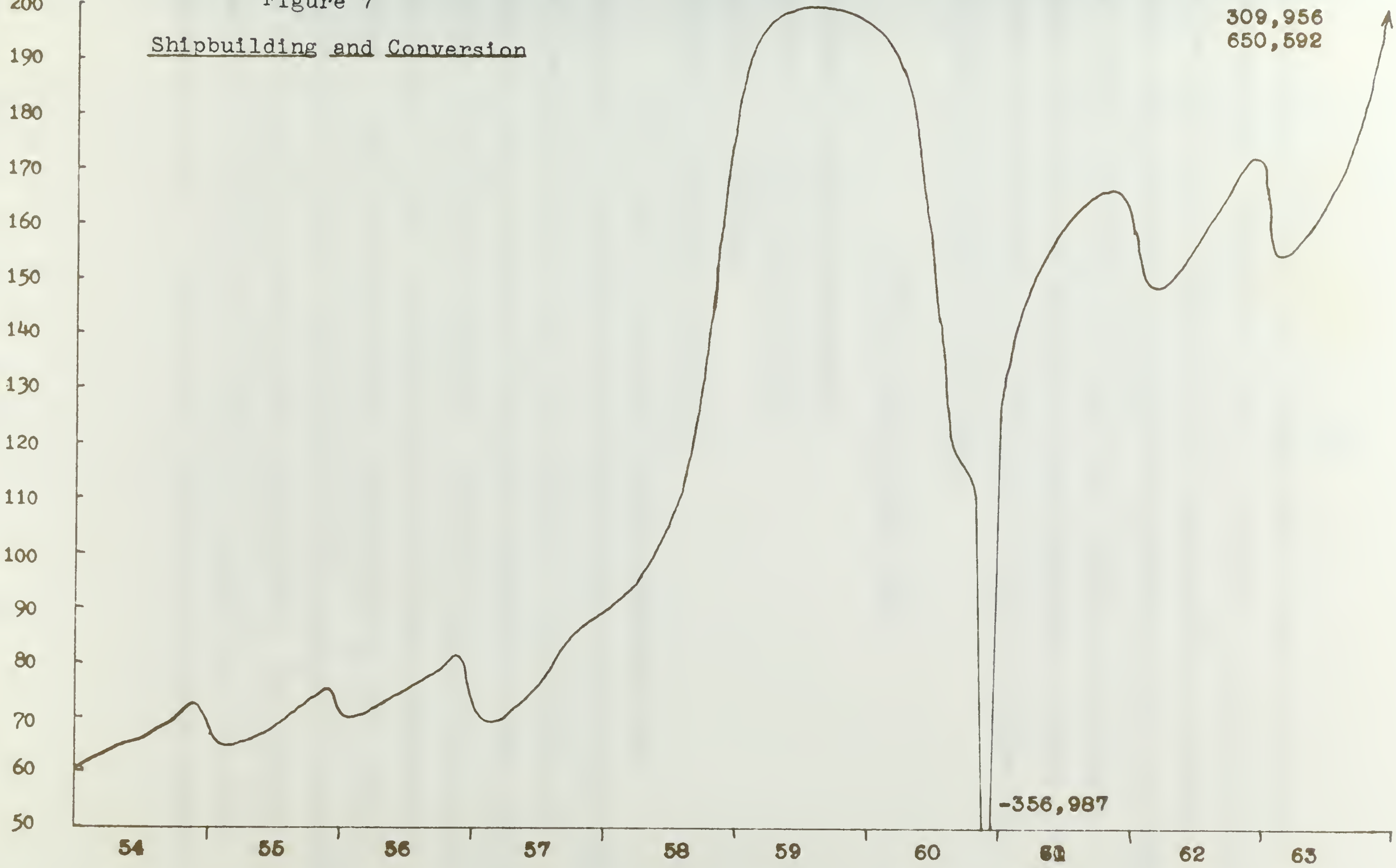


Figure 7

Shipbuilding and Conversion

preservation of ships in the Reserve fleet without overhaul or modernization. Emphasis is placed on overhaul and maintenance of active fleet ships; improvements and modernization of selected active ships especially to augment antisubmarine warfare and fleet air defense capability; and repair and overhaul of equipment. Special provision has been made in the budget for a higher lever of overhaul and alteration of naval ships in order to improve the condition and readiness of the fleet.

Military Construction, Navy

Activity 1 - Major Construction:
Activity 2 - Minor Construction:
Activity 3 - Planning:
Activity 4 - Supporting Activities:

These activities provide for the acquisition and construction of facilities for the Naval Shore Establishment within the Continental United States and overseas. The estimates are shown for budget purposes by the above activities to agree with the official apportionment categories. Military construction projects are planned to meet a particular need or to solve a particular problem. They are either military improvements to meet military requirements or capital improvements for the purposes of increasing the efficiency of the Naval Shore Establishment. The military construction appropriation finances such projects as have been authorized by law. Funds are also provided for advance planning

TABLE 7

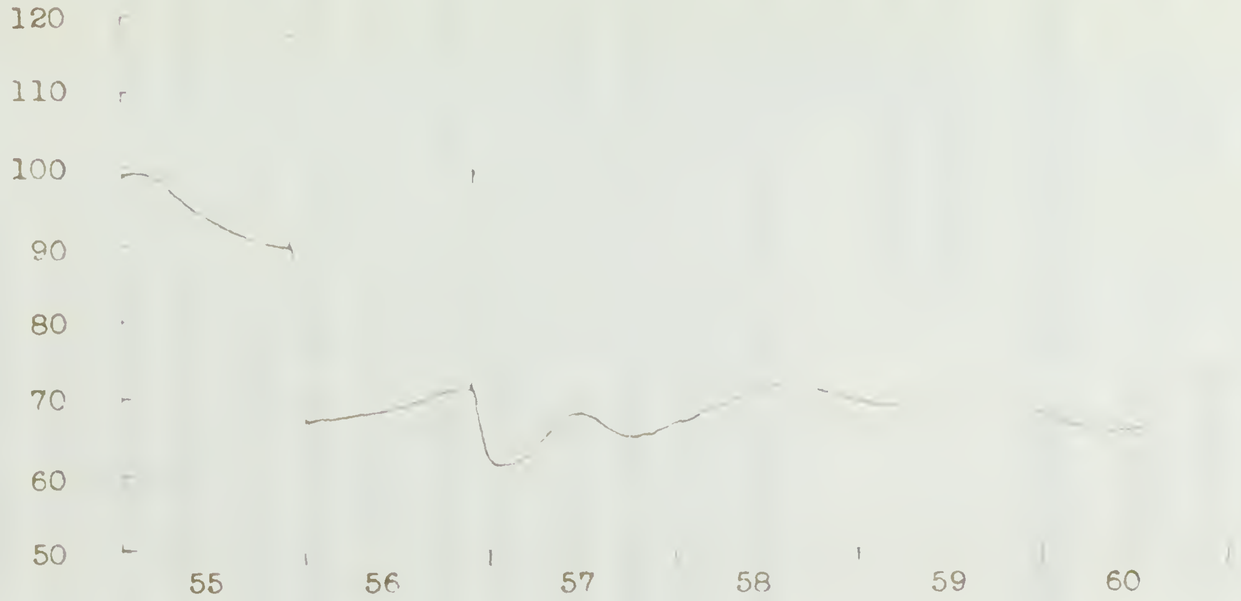
MONTHLY EXPENDITURES FOR SHIPS AND FACILITIES, NAVY
($000)

Fscl Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1954	* 87,845	* 99,589	* 113,042	* 100,685	* 93,583	* 95,240	* 88,769	* 88,389	* 97,832	* 91,228	* 82,358	* 117,830
1955	* 61,491	* 71,069	62,453	70,844	66,088	70,460	73,857	63,384	71,771	74,973	71,170	99,310
1956	58,160	64,214	61,593	56,947	66,403	74,935	64,527	64,289	62,434	70,706	54,507	72,209
1957	67,213	70,676	59,357	81,201	64,764	66,516	82,921	63,986	69,891	75,334	80,463	72,838
1958	* 61,828	* 71,634	* 68,334	* 70,586	* 65,854	* 70,559	* 71,648	* 66,555	* 68,117	* 73,045	73,944	69,582
1959	70,759	63,418	70,300	61,149	69,826	60,702	62,026	61,644	67,922	72,765	69,871	74,397

Absorbed into Operations and Maintenance, Navy.

Figure 8

Ships and Facilities



of anticipated construction projects to determine their magnitude, the physical conditions of the proposed site, and in many instances to prepare detailed plans and specifications in advance of authorization and appropriation. Included also are funds for minor construction and improvements and extensions.

Military Construction, Naval Reserve

Activity 1 - Major Construction
Activity 2 - Minor Construction
Activity 3 - Planning

These activities provide for the construction, acquisition, expansion, rehabilitation and conversion of facilities used in the training and administration of the Reserve Forces of the Navy and Marine Corps as authorized by law. The estimates are shown for budget purposes by the above activities to agree with the official appropriation categories. In all instances where practicable, these facilities are planned for use jointly by the Navy and Marine Corps Reserve personnel and, where feasible, jointly with Army and Air Force Reserves. In budget presentations the estimates are justified under three categories; namely: (1) Naval Reserve, Aviation; (2) Naval Reserve, Surface; and (3) Marine Reserve, Ground. This serves to facilitate consideration and review of the program by indicating the reserve programs which they support and by identifying reserve activity responsible for

TABLE 8

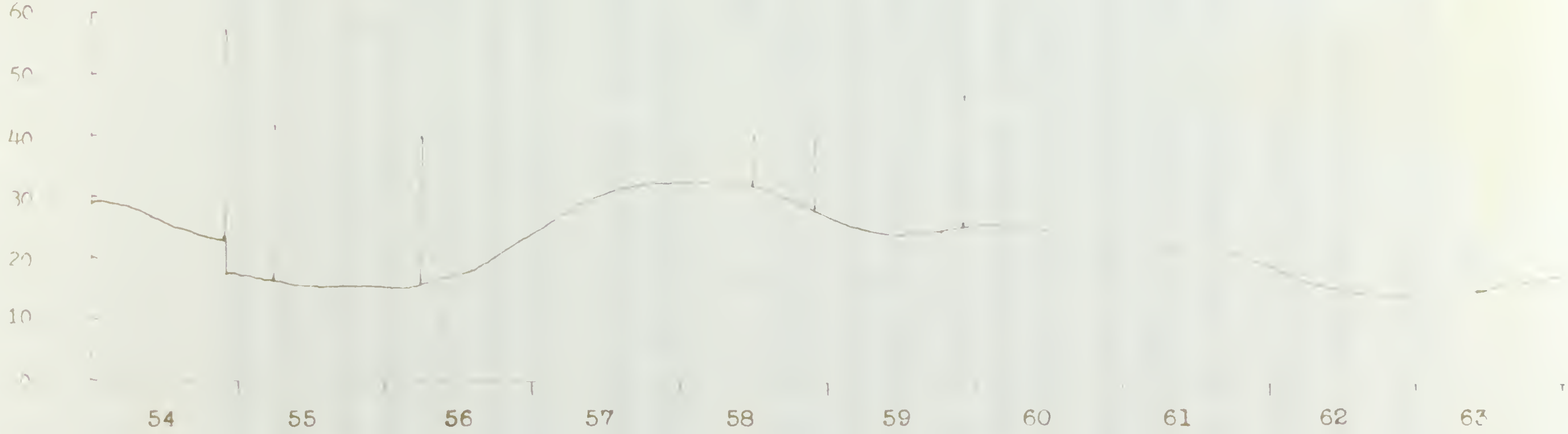
MONTHLY EXPENDITURES FOR MILITARY CONSTRUCTION, NAVY
($000)

Fscl Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1954	21,160*	29,917*	34,597*	31,145*	32,651*	28,080*	23,817*	21,294*	26,445*	22,679*	22,782*	57,490*
1955	11,570*	17,141*	17,102	41,825	15,314	15,802	15,767	13,606	16,029	17,344	15,875	22,602
1956	8,911	14,318	14,014	39,986	16,921	18,174	17,089	15,804	21,913	26,047	19,642	33,042
1957	17,070	28,358	22,503	35,740	36,290	27,509	29,404	26,325	30,933	29,311	36,483	33,642
1958	31,941*	32,680*	30,168*	34,843*	26,143*	32,698*	41,817*	23,682*	24,876*	25,680	25,020	39,983
1959	12,948	22,329	24,137	23,122	31,604	31,604	27,958	29,428	19,666	26,202	30,108	46,823
1960	14,552	25,279	27,710	21,236	26,013	34,717	15,884	17,360	23,866	15,421	19,369	35,426
1961	14,183	23,880	19,765	24,000	23,655	26,669	18,754	20,526	22,588	21,477	21,989	29,548
1962	13,219	16,970	20,256	14,026	13,550	17,401	13,097	14,674	14,717	10,817	14,801	16,050
1963	13,769	16,353	14,802	15,456	12,806	18,041	13,160	18,882	12,051	17,110	18,771	18,985

alled Public Works, Navy, FY 1954, 1955.

Figure 9

Military Construction



the justification of particular projects sponsored by them.

Servicewide Operations, Navy
(Now Activity 7, Operations and Maintenance, Navy)

Facilities and programs under the management of the Chief of Naval Operations, including his headquarters staff, are the principal activities financed under this activity. Included are unified command headquarters, naval stations, naval district headquarters, the naval communication system, the Naval Security Group, the Oceanographic Office, the Naval intelligence and programing services for command and control systems. Also under this activity are the operations of the offices of the Secretary of the Navy, the Judge Advocate General of the Navy, and the Chief of Naval Research.

Servicewide Supply and Finance
(Now Activity 6, Operations and Maintenance, Navy)

The workload of this activity is directly responsive to fleet, air, and shore station operations, including major procurement actions. This activity encompasses the logistical support of major active forces, both continental and overseas, at shipyards and at fourteen major supply depots and centers. Planning and programing for this support, including procurement and requirements determination, is accomplished by eleven inventory

TABLE 9

MONTHLY EXPENDITURES FOR MILITARY CONSTRUCTION, NAVAL RESERVE
($000)

Fscl Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1954	--	--	--	--	--	88	29	28	72	106	159	107
1955	55	139	166	1,058	576	1,511	741	602	1,091	601	697	1,567
1956	586	882	1,311	1,483	1,831	1,568	1,486	1,213	1,345	1,249	1,927	1,709
1957	614	1,373	1,919	1,456	1,543	1,482	1,674	771	1,244	1,115	866	1,247
1958	927	1,996	2,329	2,462	1,670	1,774	1,153	1,278	1,374	974	1,011	1,873
1959	935	1,257	1,445	1,812	1,475	976	866	925	772	873	775	1,266
1960	437	703	1,316	1,258	1,146	1,080	650	757	1,036	490	651	850
1961	581	660	1,616	775	1,329	564	390	568	452	386	1,058	814
1962	842	899	698	790	408	979	754	681	814	982	694	1,012
1963	443	496	807	530	556	419	238	150	357	335	676	591

Called Military Construction, Navy Civilian Components, Expenditures started December 1953
Changed to present title

*Disregard

Figure 10

Military Construction, Naval Reserve

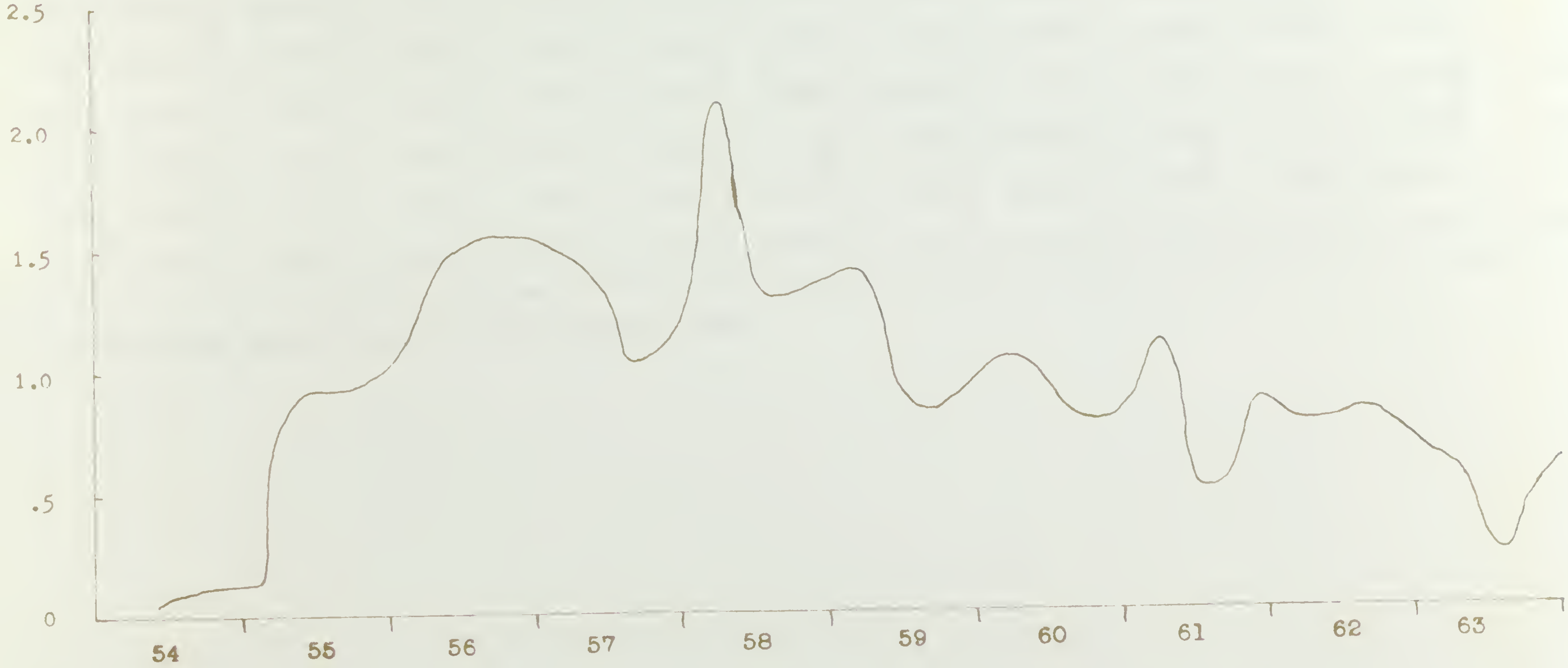


TABLE 10

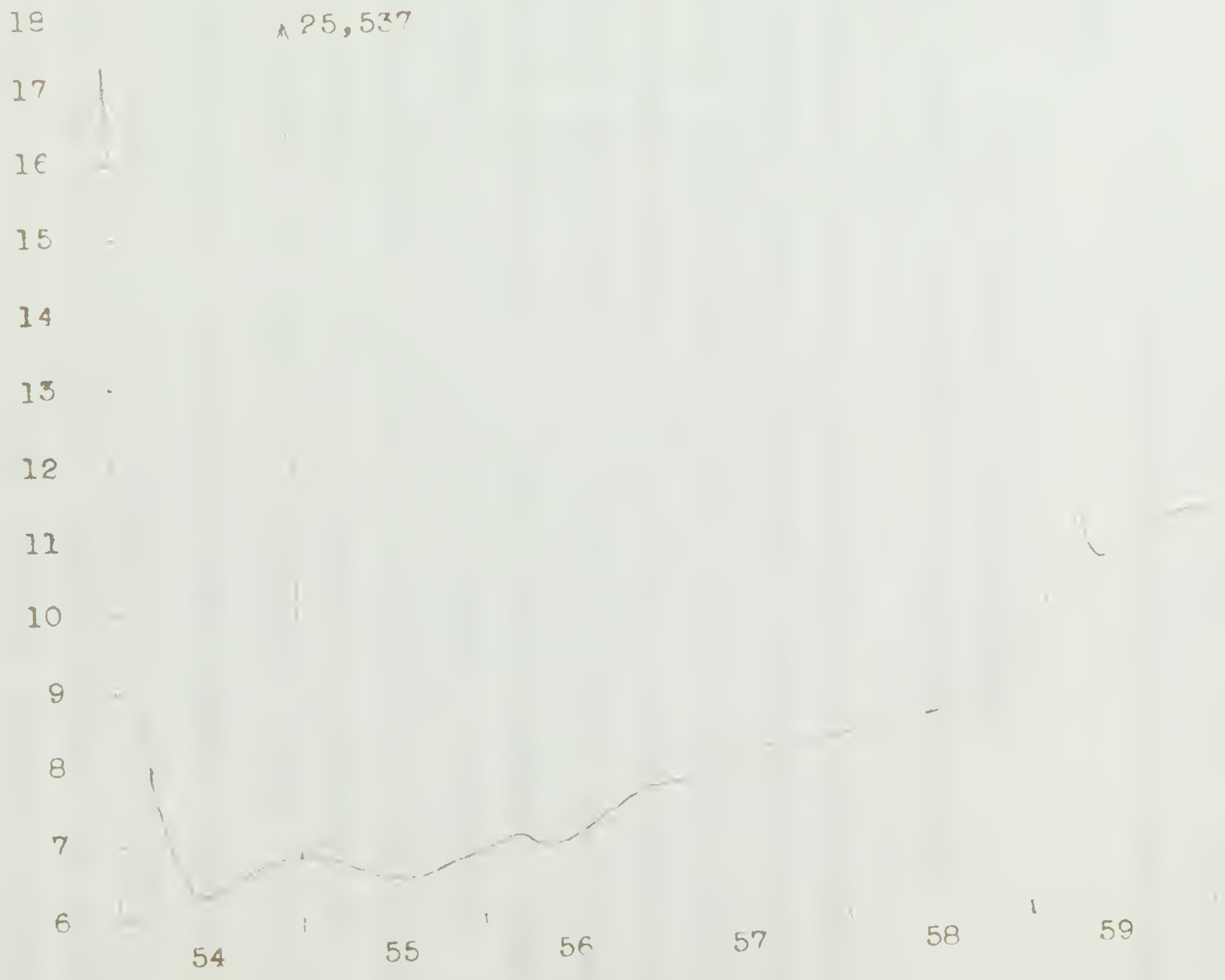
MONTHLY EXPENDITURES FOR SERVICE-WIDE OPERATIONS, NAVY
($000)

scl ear	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
954	16,918*	16,624*	17,820*	6,637*	7,476*	4,733*	6,403*	6,246*	6,390*	7,764*	6,061*	8,465*
955	25,537*	15,649*	6,005	7,310	6,097	6,597	6,510	6,418	6,729	6,885	6,424	7,034
956	6,372	6,219	8,558	6,304	6,941	7,042	6,836	7,107	8,180	6,853	8,139	8,616
57	6,584	7,938	6,907	10,065	6,990	7,412	8,855	8,476	7,734	8,501	7,566	8,943
58	7,669*	9,922*	7,603*	7,682*	8,291*	8,471*	9,262*	8,538*	7,924*	7,890*	8,403	10,375
59	11,039	8,827	9,444	13,872	9,138	9,806	11,139	11,166	10,564	10,867	10,752	11,507

sorbed into Operations and Maintenance, Navy.

Figure 11

Service-Wide Operations, Navy



control points of which the Aviation Supply Office in Philadelphia is the largest. Transportation costs of intra-Navy movement in material directed by these inventory control points, including shipment by Military Sea Transportation Service, are also funded by this activity.

Naval Personnel, General Expenses

(Now Activity 1, Operations and Maintenance, Navy)

Provision is made for the recruiting and procurement of all naval personnel through approximately one thousand recruiting facilities, and their individual group training (except medical and air) in one hundred and forty naval schools, in over fifty civilian colleges and in three hundred and nineteen Reserve training centers. The training at naval schools includes recruit training, basic technical training, advanced technical training, scientific training and professional education for officers and enlisted men. The civilian colleges are training officers and enlisted men primarily in various scientific and engineering fields not covered by Naval schools and over ten thousand Naval Reserve Officer Training Corps midshipmen for the Regular and Reserve Navy and Marine Corps. The Reserve training centers maintain the training of Naval Reservists. The Naval Academy annually prepares approximately three thousand five hundred midshipmen for careers as Naval or Marine Corps officers. Provision is also made for the distribution

TABLE 11

MONTHLY EXPENDITURES FOR SERVICE-WIDE SUPPLY AND FINANCE, NAVY
($000)

scl ear	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
954	* 36,520	* 29,641	* 35,845	* 32,665	* 31,012	* 27,130	* 29,244	* 29,162	* 29,709	* 32,592	* 27,399	* 32,437
955	* 23,378	* 25,913	27,275	30,049	25,356	24,804	27,493	23,956	28,079	27,908	24,235	30,820
956	38,289	25,342	29,777	21,746	23,873	25,925	28,496	21,268	26,187	26,531	25,634	26,704
957	24,913	29,170	21,090	24,040	25,863	22,716	25,884	24,602	24,680	25,355	22,152	26,947
1958	* 24,382	* 26,837	* 21,353	* 26,225	* 26,454	* 21,710	* 32,256	* 23,137	* 21,147	* 20,404	27,167	23,297
1959	35,274	25,348	29,070	26,199	27,365	25,326	26,914	24,379	22,474	21,733	20,833	29,846

Absorbed into Operations and Maintenance, Navy.

Figure 12

Service-Wide Supply

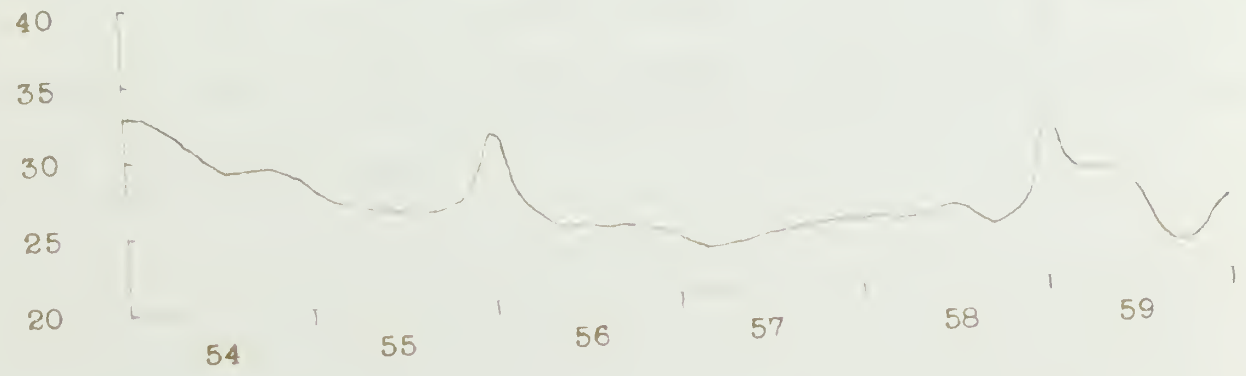


TABLE 12

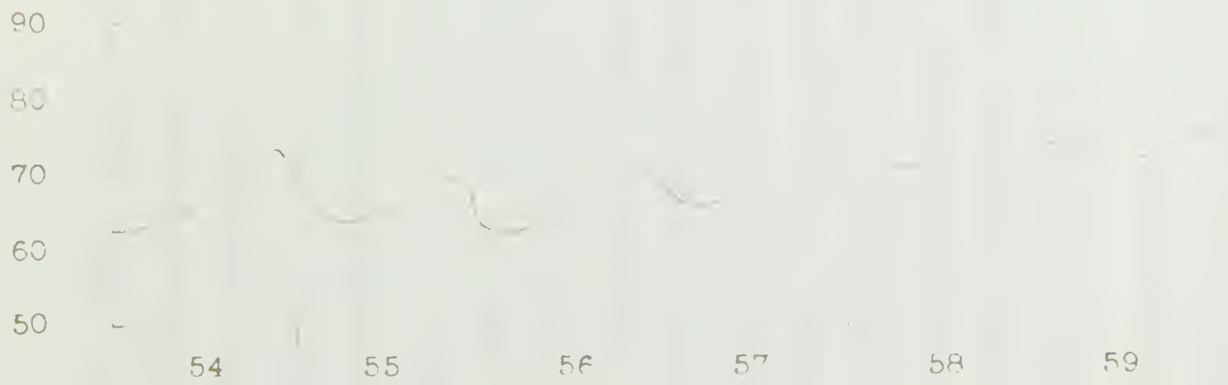
MONTHLY EXPENDITURES FOR NAVAL PERSONNEL, GENERAL EXPENSES
($000)

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
4	*6,289	*6,221	*6,323	*6,324	*7,055	*5,893	*6,394	*6,713	*7,394	*7,491	*6,804	*8,654
5	*6,097	*6,545	6,861	5,876	6,505	6,720	6,029	6,251	7,483	6,643	6,330	8,029
56	5,541	5,489	6,722	5,706	7,026	6,420	5,766	6,905	8,072	6,643	7,557	7,720
57	5,922	7,228	5,762	6,766	6,584	6,492	7,384	6,546	7,643	7,892	7,299	6,898
8	*6,394	*7,695	*6,211	*7,545	*6,477	*7,367	*7,371	*7,129	*6,904	*7,753	7,260	6,989
59	7,881	7,117	7,138	7,284	6,809	8,014	6,920	6,755	7,192	7,897	7,994	6,997

sorbed into Operation and Maintenance, Navy.

Figure 13

Naval Personnel, General Expenses



of all naval personnel to fleet and shore activities and for technical administration of their welfare.

Ordnance and Facilities

(Now combined with Aircraft and Facilities under Activity 2, Operations and Maintenance, Navy)

These funds are required for preparation of ordnance and ammunition for operational readiness such as offensive and defensive missiles and missile-supporting equipment. These complex equipments must be overhauled, modernized and maintained to render the units operational at all times. Supporting ordnance facilities and equipment are vital, along with detailed training information and techniques for personnel involved, in order to ensure reliable performance of Navy equipment, ammunition, and missiles such as TERRIER, TARTAR, TALOS, SIDEWINDER, BULLPUP, and SPARROW, as well as nuclear ordnance available to the Navy's striking forces. At the same time there continues to be an urgent demand for maintaining and overhauling conventional components for issue to our deployed fleet. The ordnance facilities funded must perform laboratory investigations, calibrations procedures, technical evaluations and reporting procedures for periodic and post repair checkout of components to ensure safety and reliability.

TABLE 13

MONTHLY EXPENDITURES FOR ORDNANCE AND FACILITIES, NAVY
($000)

l r	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
4	81,413*	95,380*	92,481*	81,560*	82,672*	84,093*	95,718*	95,255*	89,315*	66,070*	62,377*	102,834*
55	45,458*	46,053*	53,558	47,351	45,924	50,562	44,747	44,993	59,726	44,138	46,954	70,214
56	17,524	10,672	14,091	11,128	12,473	9,014	9,488	14,283	17,029	13,709	14,234	26,012
957	13,721	13,610	12,497	17,372	13,311	13,501	14,423	13,672	16,898	15,007	16,508	12,169
958	14,023*	16,710*	10,533*	14,315*	13,475*	9,954*	12,720*	12,471*	10,460*	13,032*	13,851	12,582
959	15,981	14,387	13,409	14,423	13,798	13,126	13,401	10,541	11,756	11,308	13,944	12,657

bsorbed into Operations and Maintenance, Navy.

*

Figure 14

Ordnance and Facilities

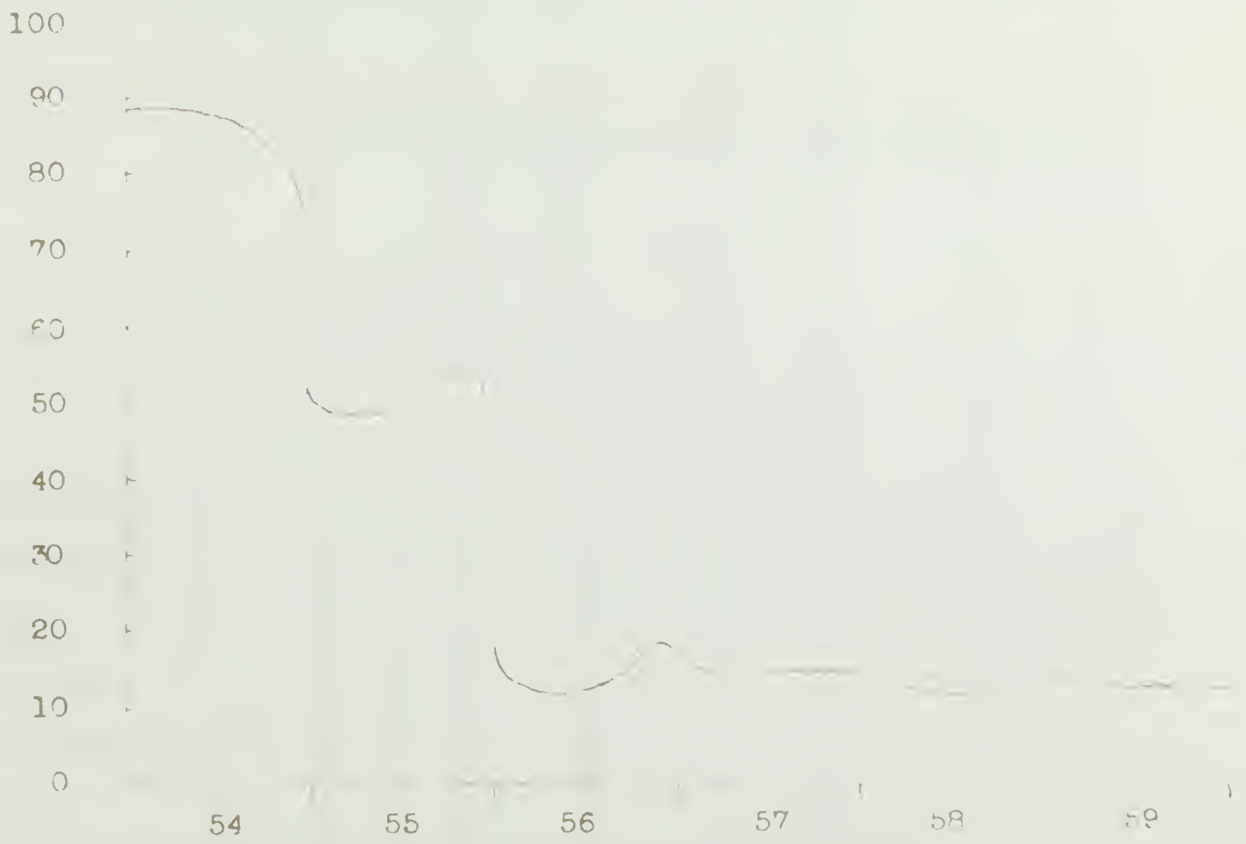


TABLE 14

FISCAL YEARS IN WHICH EXPENDITURES EXCEEDED NEW OBLIGATIONAL AUTHORITY

Fiscal year	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963
Military Personnel					*	*	*	*		
Reserve Personnel										
A/C and Related Procurement	*		*	*	*	*	*			
A/C and Facilities				*		*	/	/	/	/
Shipbldg. and Conv.	*						*			
Ships and Facilities	*	*		*	*	*	/	/	/	/
Mil. Construction	*	*		*	*	*	*	*		
Reserve Construction				*	*	*	*	*	*	
Svc-Wide Operations	*	*				*	/	/	/	/
Svc-Wide Supply			*				/	/	/	/
Nav Pers, Gen Exp.		*				*	/	/	/	/
Ordnance and Facilities	*	*		*		*	/	/	/	/
Recession Year	#				#		#			

* Indicates Expenditures greater than Appropriations.
/ Indicates information not available.
# Indicates fiscal year which had major business contractions.

CHAPTER IV

ANALYSIS OF DATA

In this chapter an analysis and identification of trends in the Navy's spending which might indicate whether or not an attempt is being made to use these funds as an economic tool of government will be made. Comments will be made for each of the tabulated sections of data, leaving for the last chapter the conclusions that can be drawn from this analysis.

Before beginning the detailed analysis, a few words about the problems involved in obtaining coherent expenditure data. At the end of each fiscal year the Office of the Assistant Secretary of Defense, Comptroller, publishes a form with all Department of Defense expenditures, giving the unexpected balance carried into this fiscal year; new obligationary authority; monthly expenditures for each appropriation title plus the closing figures to carry forward into the next fiscal year. There is no breakdown of spending within the individual appropriation title accounts readily available for inspection. These figures are apparently kept within the various offices which administer the financial program for the different segments of the Navy.

Another problem, touched upon briefly in Chapter III, is that of finding and following an appropriation title for the period under study which does not change appreciably in the characteristics of its spending or in the characteristics of its name. Even a casual examination of the monthly expenditure reports shows few appropriation titles which can be easily followed.

Each year it seems there are changes in the presentation of the appropriation title system. In 1960 there was a change which incorporated many separate titles into one large one called Operations and Maintenance, Navy. This change brought a degree of similarity to the appropriation titles for all the services. Even though the appropriation title language was still indicated on the monthly expenditure reports, the figures given under Aircraft and Facilities, for example, lost all meaning. The information from fiscal 1960 reflected only spending that was carried out to make payments under the obligations incurred under the formerly separate title. Instead of immediately changing over to the new system, the old titles were carried until all obligations incurred would be payed for. This does not mean that the functions which were carried out under the old appropriation title were no longer being performed. New obligations were incurred under the new titles. This shift made it impossible to follow several of the selected titles through the entire period.

An examination of the Navy Budget Digest's covering fiscal years 1957 through 1963, reveals that many of the titles that are being carried are not reflective of that title name. The title, Aircraft and Facilities, originally was designed to support flight operations of the Navy and Marine Corps. Prior to 1954 some support of missiles was expended out of this appropriation. The major change in 1960 placed this title under Operations and Maintenance, as an activity, and as the nature of the Navy slowly changed, the title of the activity was changed. Weapons and Facilities now supports many of the missiles used by the Navy as well as being the major appropriation for the support of Naval Aviation. Changes of this sort are inevitable, but again make it very difficult to follow the spending characteristics of the Navy.

Of extreme importance is the impossibility of determining why a particular amount was spent at that given time. Some of the information is classified; the reasons are not stated in official records; individuals who now hold the responsible jobs were not the same who were there when the decision was made to spend. We are assured that the money was spent; that it was spent legally; and that it was spent for national defense.

These then were some of the problems encountered in evaluating which of the data to include in this study. Great care has been taken to ensure that all titles followed, conform closely, within the title, to the same spending characteristics. Secondly,

each title can be followed for as long a time span as possible. Within this framework, the analysis is presented.

Military Personnel

This title permits, for services rendered, payment of funds to the officers and men of the Navy. It would seem that this particular appropriation would be expended at a fairly steady rate. However, this is not true. The variation from one month to the next can amount to as much as $110 million between any two consecutive months. The average rate of spending does follow a fairly uniform curve, rising gradually. The prime cause of this has been due to the cost of living raises granted to the military during the period under consideration. The total rise in spending has amounted to about a 14% increase above that found in fiscal 1954.

The total amount expended each month is dependent on a number of factors designated in the four activities of this appropriation. Activity one, which includes the basic pay of the personnel in the Navy, is not always paid when due. Many times aboard ship men elect not to draw all of the pay due them. This is a form of savings that the enlisted men can draw interest on. At other times, when entering a good liberty port for example, all monies due will be drawn, and many of the men will try to borrow

additional funds. In one case, on a deployment to the Arctic where no liberty could be expected in three months, virtually no pay was drawn by the crew. Upon the return to their home port almost all pay was cleared from the books just prior to entering port.

Activity two provides for subsistence in kind for enlisted personnel. Essentially, personnel who are not supported by a military mess are entitled to draw "Comrats," commuted rations, which amount to about a dollar a day. (The exact rate varies with the amount allotted to feed each man, in a government mess, on a daily basis.) In an aircraft squadron, the men living ashore, and not receiving support from a government mess draw "Comrats," except when deployed and receiving rations from a military mess.

Activity three supports the travel program for the transfer of personnel from place to place. This includes only the permanent changes in duty. The payment of such funds for travel can vary in the timing, considerably, from that of the accomplishment of that travel. For example, advanced payment can be made (in certain cases) for settlement of travel to be performed by the service member. In other cases travel renumeration is collected by the serviceman at some date after the completion of travel. Officers can draw three months advanced pay (repayable in the next succeeding six months) prior to the execution of their orders.

Another method of payment for travel is the Transportation Request, or TR. This is, in effect, a check, made out by the Navy and payable to a commercial carrier, for transportation of the service man and his dependents. These TR's are not redeemed immediately by the carriers. They normally wait until they get a sizable amount to forward to the treasury for payment. All of the above items account, in part, for the erratic spending noted between any two consecutive months.

In January of 1954, there was a noticeable drop off reaching to August of 1954, (last part of the 1953-1954 recession) amounting to about $12 million per month average drop, due probably to the release from active duty of many reservists at the end of the Korean crisis. There was a climb and then a smaller drop ($5 million per month) just prior to the 1957-1958 recession. This was followed by a rise through the first quarter of fiscal 1958, followed by a shallow dip through to the end of the contractual portion of the economy at that time. Since then there has been a slow rise to the present level of spending. The aggregate rise seems to be in the order of 1.4% per year. There seems to be no strong indication that this appropriation is used as an economic weapon.

Reserve Personnel

The spending under this appropriation title is very erratic in nature. Within the wide monthly fluctuations there seems to be

a minor secondary pattern reflected within each quarter. The first month of the quarter seems to generate the largest amount of spending, with decreases during the next two succeeding months of the quarter. There was a slight dip in the average monthly spending during the early part of the 1954-1955 recession, with a gradual upswing through fiscal 1955. During fiscal 1956 and 1957, there were some very large gyrations in the average monthly spending. The spending during this period does not seem to be tied to the period of the fiscal year. The three peaks and troughs involved in this series appear to increase in magnitude with each swing in the cycle. Peak spending is reached at the start of fiscal 1956, with the trough reached in mid-year. The second peak, higher than the first, occurs at the beginning of fiscal 1957 with a deeper trough in mid-fiscal year 1958. This coincided with the start of the 1957-1958 recession. The fall off in spending was comparatively rapid. The several fluctuations seemed to level out with an almost level average rate of spending, which was about $6.5 million per month. Even here, however, it can be seen that peaks, however minor, are present at the turn of the fiscal year, with associated troughs at mid-fiscal year. The rapid drop in spending, with no corresponding rise in spending after the drop, may have helped to prolong the 1957-1958 recession.

Aircraft and Related Procurement

Spending within this appropriation title seems to be contracyclical in nature. During the 1954-1955 recession, spending increased at a steady rate, culminating in an unusually large amount of expenditures in June of 1954. Average spending then dropped to a relatively stable rate of about $140 million per month, until late in fiscal 1956. There was a small peak in average spending, this fiscal year, also culminating with a very large year-end spending spree. In the initial stages of the 1957-1958 recession, there was a slight dip in the average spending rate of this appropriation title, but a large steady climb began about September, 1956, with the average rate of spending increasing from $140 million to $205 million per month. This spending rate continued till the end of fiscal 1958, at which time a slow decline in the rate of spending was noted, dropping to about a $165 million per month rate. Again, there was a peak spending month in June, 1959.

Fiscal year 1961 was the first year that the new appropriation title, Procurement of Aircraft and Missiles, was introduced. This new appropriation was to replace the old appropriation title. In order to properly follow the spending trends it was necessary to combine the two appropriation titles. No new obligational authority was granted to the old title. The

money on hand for this title would continue to be expended to meet previously committed obligations.

Fiscal year 1961 saw little increase in the average rate of spending until late in the year, when there was a slight trend toward increased spending. A very rapid rate of increase in expenditures occurred in fiscal 1962 and 1963. This can be explained, again in part, by noting that the cost of modern aircraft (or airborne weapons systems, as they are now called), have increased tremendously. Not only has the cost of manufacture increased, but the sophistication of power plants and electronic equipment, associated with the aircraft, and which the weapons system would be useless without, have in many cases surpassed the cost of the basic airframe.

The two year increase in spending ended on a very unusual note. May of fiscal 1963 saw peak spending of $387.1 million, with a drop to $137.4 million at the close of this fiscal year. The average rate of spending was about $260 million, with the curve sloping up. The exact meaning of this is not known. Until figures for fiscal 1964 are available, the exact meaning of this spending could not indicate a trend. This writer thinks that this was nothing more than the normal wide fluctuations of spending that can occur between any two consecutive months. It is expected that the trend of spending, with respect to procurement under this appropriation title, will continue to slope upward.

There are no indications that the spending for this title might possibly be tied to the general state of the economy.

Aircraft and Facilities

This appropriation title could not be followed through the entire time span under consideration. The spending in this area consists essentially of the operating costs of Naval Aviation. These funds buy the fuel and oil needed to keep aircraft flying. The initial spending in this area that is recorded seems to be a carry-over from the Korean crisis. Spending was maintained at about the $73 million per month level, with an increase in spending at the end of the fiscal year to keep from returning money to the Treasury. A saw-toothed curve starts to develop, the initial cycle lasting through one fiscal year. However, in fiscal 1957 the curve did not drop at the end of the fiscal year but was stretched out for an extra nine months, dropping shortly before the end of fiscal 1957. This drop in spending led very slightly the recession of 1957-1958. The spending rate tended to remain low during the remaining portion of the examination period. The drop in spending of about $8 million per month during this business recession did not help to maintain a stable economy, but tended to aggravate the situation.

Shipbuilding and Conversion

Spending under this title reflects the most unique curve of the various titles studied. The first three years under consideration show a gradually increasing saw-toothed curve, with the lowest level of spending in the early part of the fiscal year, reaching a peak in spending in June. This pattern of spending was observed for the fiscal years 1961 through 1963, with the rate of spending being at about twice the level of fiscal 1954 through 1956. The saw-toothed characteristics of these last three years show a much sharper rise and fall for each of these years. The spending during May and June of 1963 shows a tremendous increase. It is not known whether this is a repetition of the type of spending in the period 1958 through 1960, or the start of a very high level of spending.

The period from mid-fiscal 1958 through the end of fiscal 1960 reflects a very high rate of spending. This was caused primarily by the development and urgent military need of the Polaris submarine. In addition, several surface nuclear powered ships were required along with many nuclear powered attack submarines. All of this took large sums of money. The return of some $357 million in June, 1960, probably reflects sums returned due to the expiration of appropriations authorized in the late forties and early fifties. The characteristics of spending for this appropriation title have been conducted so that they tend to

oppose the economic contractions. However, it is felt that this happens to be coincidental, and that any justifiable military requirements would take priority over economic considerations.

Ships and Facilities

This appropriation account corresponds to the Aircraft and Facilities appropriation except that it pertains to the ships of the fleet, rather than to the aircraft. An average rate of spending, sloping down, of $95 million per month, characterizes the initial trend in this curve. The high rate of spending during fiscal 1954 is apparently a carry-over from the Korean crisis. There is a sharp drop in the rate of spending in fiscal 1955, with a smaller drop in fiscal 1956. From fiscal 1956 through fiscal 1959, a very steady rate of spending is apparent. Additionally, the fluctuations from month to month are relatively small. There seems to be no indication of this appropriation being used for economic purposes.

Military Construction

This appropriation has a relatively stable rate of spending. Except for several small monthly peaks, the changes in spending tend to be very gradual. There is a sharp drop (approximately 25% of the average rate of spending of fiscal 1954), with a steady rate

of spending established for the next eighteen months. From mid-fiscal 1956 there is a gradual rise in the rate of spending to $30 million per month. The changes in the amounts spent, from one month to the next, are relatively small. Of some six separate monthly peaks, only three of these occurred at the end of a fiscal year. The remaining peaks were scattered randomly throughout the fiscal year.

There seems to be little or no indication that the spending performed within this appropriation title is used to help manipulate the economy.

Military Construction, Naval Reserve

This appropriation was first listed in fiscal 1954, with initial expenditures being made in December, 1953. Though the maximum spent in any one month was $2.5 million, the spending shows great variation. The trends follow no pattern and are very erratic in nature. After a slow start, the monies spent rose rapidly, and then commenced gyrations which probably are still continuing. The longest sustained level of spending that could be called steady occurs from the second quarter of fiscal 1956 to the second quarter of fiscal 1957. A very substantial peak occurs just after the downturn in the economy, in August, 1957. For a three month period the spending in this area almost doubles, before returning to the lower level, erratic, spending pattern.

Also, a five month dip in spending, beginning in December, 1960 occurs. In one case there is a sharp increase in spending, with the economic downturn. In the other, December, 1960, there is a sharp drop in spending with the economic downturn. In one case the spending opposed the economy; in the other the spending followed the economy. This area is one that could probably be explored as one in which the spending patterns could be tied more closely to the economy. The amounts expended in this area, however, are very small, and it is problematical whether this spending could have any great effect on the total economic picture.

Service-Wide Operations

This appropriation has a very sharp drop from the spending rate level of the Korean crisis, with only one major peak occurring in July, 1954. The average rate of spending tends to be very smooth, with an average low, in fiscal 1954, of $6.25 million, climbing regularly to an average rate of about $11 million in fiscal 1959. There seems to be no pattern that could be said to be tied to the economy.

Service-Wide Supply and Finance

This appropriation follows a rather steady trend with only two minor peaks in spending. These occur at the end of fiscal 1955 and 1958. The trend of spending is generally downward, with

a gentle slope, through the end of fiscal 1955. From then until the end of the fiscal year 1959, the monthly rate of spending seems to be almost flat, at about $25 million per month. There seems to be no tie-in with the economy.

Naval Personnel, General Expenses

The spending for this appropriation follows a regular saw-toothed pattern. A slight tightening of this pattern occurs in fiscal 1957, with a yearly peak occurring about three months before the end of the fiscal year. The drop after this peak is not nearly as deep as those previous to it, and the next saw-tooth peak occurs at the end of fiscal 1958. The average rate of spending seems to be about $5 million per month more from early 1958 to the end of fiscal 1959, than the average rate of spending prior to 1958. The month to month expenditures vary at times as much as twenty million dollars. The flattening out of the curve during the 1957-1958 recession, in all probability, helped to steady the economy somewhat.

Ordnance and Facilities

The fiscal years 1954 and 1955 show the effects of spending from the Korean War. A good bit of the money expended during this time was used to replenish the stores of ammunition for possible future contingency uses. Plateaus of $88 million per

month in fiscal 1954 and $50 million per month in 1955 give way to a very steady level of spending, at about $15 million per month. The variations in the rate of spending for any two consecutive months are very small. There appear to be no peaks or troughs that could conform to the economic picture. There is a very slight dip in the average rate spent per month during fiscal 1958, but amounts to no more than about $2 million per month.

There seems to be, once again, no tie-in with the economy.

Table 14: Expenditures in Excess of Appropriations

This table was constructed with a view toward the establishment of any indication that might show that in recession years expenditures are speeded up to help the economy. It must be pointed out that there is nothing illegal in the over-expenditure of funds above New Obligational Authority (NOA). Each appropriation must be obligated within the period specified by the basic appropriation act covering these expenditures; however, the expenditure of funds to pay for these obligations can occur at a later date. In many instances there are carry-overs of obligated but not expended amounts from previous fiscal years.

This table attempted to show if the spending rates were increased, in relation to the appropriations for that year, an

attempt to help pick up the economy. This, of course, brings up the point as to what constitutes the stimulus to the economy--obligation of funds or expenditure of funds. There would be no problems if obligations and expenditures occurred simultaneously. Since this does not occur, and since information concerning the obligation of funds was not available, reliance and inferences must be made from the expenditure data.

The excess in spending in fiscal 1954 over appropriations is probably due to the adjusting of the services to the new levels of spending required when no military crisis exists. During the fiscal years 1958 and 1962, relatively little unusual spending in excess of appropriations was noted. Fiscal 1959, a good business year, shows the only trend toward this type of spending. Nine out of twelve appropriation titles examined show an excess of spending. There is the possibility here that obligations were used in fiscal 1957 to spur the economy and that payment for these obligations was only then forthcoming.

Summary

This then is the basic findings of this study. The interpretations and conclusions generated from them will be discussed in the next chapter, along with some comments concerning some general concepts relating to government spending.

CHAPTER V

CONCLUSIONS AND COMMENTS

This study has shown that there is no clear relationship with the Department of the Navy's spending and its use as a tool to help control the economy. The evidence indicates that the Navy's spending is strictly a function of military need.

The remaining comments that will be made concern some of the problems generated by government spending and in particular, the military spending that has become necessary due to the present cold war situation, which promises to continue for many years. The basic economic problems that will have to be solved will be those of correcting the high rate of military spending today. If there is a marked easing of world tensions and the military posture of the United States is decreased, what will replace the 10% of Gross National Product now being generated by the military?

What are the prospects for continued growth for the U. S. economy? In 1957 a survey was made of fifty prominent economists.[1] One of the questions raised was: "What is the most important economic problem facing the United States today?" It is interesting

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[1] Robert L. Heilbroner, "The Price of Growth," The Reporter, January 7, 1960, Part I, p. 29.

to note that not one of the economists mentioned a _lack_ of growth as one of this country's economic problems. It was a foregone conclusion that the economy had to grow. Why? There were five important reasons.

1. Systematic research and development for new products.[2]
2. World War II baby boom.
3. Growth potential of such new industries as air conditioning, electronics, etc.
4. Managerial awareness of growth; therefore, more realistic planning is made for it.
5. In a democratic form of government, no party can remain in power for long if it allowed a depression to run its course.

Many of the so-called new products are merely slight modifications of existing devices. The new industries in air conditioning etc. deal, to a large extent with luxury items. We have an over-abundance of goods, high unemployment, large military spending, and poverty existing side by side.

Since the end of World War II our economy has shifted slowly from one of industrial capitalism to one with strong indications of becoming a military capitalistic economy. Approximately ten percent of the Gross National Product is spent in

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[2] Some feel that there have been no _new_ consumer goods developed in the last twenty years. See: David Brinkley, Review of _Convention_ by Fletcher Knebel and Charles W. Bailey II, _The Washington Post Book Week_, (March 15, 1964), p. 6.

defense; and this without infringing on the civilian sector of the economy.[3] In order to maintain even a small rate of growth, very large sums must be expended just for plant and equipment. For example, with a $480 billion Gross National Product, $30-35 billion[4] is required for plant and equipment. With a possible Gross National Product of $900 billion in 1980, $50-60 billion, in terms of today's dollars, will be needed for plant and equipment.

In the event of an economic down turn, can the government enter the picture and spend as it should? It can; but can the government afford to? Using the 1958 recession as an example, the government would have had to spend an extra $15-20 billion to provide the plant and equipment needed to generate the modest growth experienced prior to this recession (approximately a 30% drop in the economy during this period). This does not reflect the spending normally incurred by government when recession periods strike.

In addition to the above problem, we have one which is that of possible reduction of spending within the military, coupled with a genuine easing of world tension. This problem has been summed up by David Brinkley in a recent book review.[5]

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[3] Heilbroner, loc. cit., p. 31.

[4] Ibid., p. 29.

[5] Brinkley, op. cit.

> After the last war, we moved fairly easily from a military to a civilian economy because we had a great demand for consumer goods not available during the war, and when the Pentagon's wartime spending stopped, there was plenty of civilian work to do. But now the Pentagon is the biggest single consumer in the country; indeed, in the world, and at the same time we are smothered in automobiles, washing machines and motorized barbecuers.
>
> No one really expects any substantial disarmament now, nor any precipitous cuts in defense spending, but it is reasonable to hope that in the next few years the burden of a $50-billion-a-year military outlay can safely be lightened. There must actually be a time when "enough is enough." But when there is a lively economy, mountains of consumer goods, 10 percent or more of the country working for the military, and there is still substantial unemployment, there will be, and is, relentless pressure to keep the defense contracts coming.
>
> The present Secretary of Defense has said he does not want military buying to become a welfare or make-work program, but it already has, and it tends to perpetuate itself. The longer it goes on, and the more our labor and industry and educational system become attuned and adapted to it, the harder it is to stop. While so many scientists, engineers and designers have been assigned to military work, not one major new consumer product has been developed in this country since television, 20 years ago.
>
> So it is not at all exaggerated to say our reliance on armaments is a national danger, and some time our political leaders will have to deal with it.

The country has reached the position where the government must continue to spend, probably at a slowly increasing rate, in order to keep the society "affluent." There is little doubt that total givernment spending cannot be reduced. Reduce the military sector then government must increase in some other sector, and probably without changing the character of the spending. By this it is meant that if a cut is made in the procurement of radio

transmitters and receivers by the Armed Forces, then increases in spending in other sectors, such as the Federal Aviation Administration, which could use the same type of equipment, must be made.

The time has come when there must be a central coordinating group to provide the guidelines, but more important, have the power to implement these guidelines to provide the best economic conditions for our society. It is ridiculous for this country to have so many groups working, or so it seems, against each other. Congress gives a tax cut (to spur the economy); Congress wants to cut spending (to contract the economy); the Federal Reserve wants to restrict the amount of money (to contract the economy); Congress wants to increase salaries of federal employees (to spur the economy). What is the net result of this type of action?

American capitalism must change and adjust to the demands required by the population and the world political situation. Some writers feel that we are heading toward some form of "capitalistic socialism." Regardless of the economic or political form of our society, the problems that arise must be conquered, until eventually we will have a society with full employment, affluence, no poverty, no recessions and no inflation, within a world at peace.

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